OLD!

THE ESSENTIAL GUIDE TO CLASSIC GAMES

retro* GAMER

AMSTRAD | COMMODORE | SEGA | NINTENDO | ATARI | SINCLAIR | NEO GEO | SONY | COIN-OP | MOBILE

DAVID CRANE

THE ACTIVISION CO-FOUNDER ON HOW THE COMPANY STARTED



10 PAGE SPECIAL

ALSO INSIDE

UFO: ENEMY UNKNOWN | LYLAT WARS
PHANTASY STAR IV | MINED OUT
METROPOLIS STREET RACER | R-TYPE

SPEED KINGS

HOW THE ARCADE RACER EVOLVED FROM START TO FINISH



ATARI XEGS

WHY ATARI'S HYBRID CRASHED AND BURNED



BOULDER DASH

PETER LIEPA CELEBRATES THE 30-YEAR HISTORY OF ROCKFORD

FEATURED INSIDE THIS ISSUE:



ALTERED BEAST

THE UNTOLD STORY BEHIND SEGA'S CULT ARCADE FAVOURITE



JIM BAGLEY

THE 8-BIT CODER ON HIS SPECTRUM HITS AND GOING IT ALONE ON iOS

ip IMAGINE PUBLISHING
Digital Edition
GreatDigitalMags.com
ISSUE 124

THE RETROBATES

FAVOURITE ARCADE RACER



DARRAN JONES

I want to say *OutRun*, but I play *OutRun 2002: Coast To Coast* far more, so I'm going with that.
Expertise:
Juggling a beautiful wife two gorgeous girls and an award-winning magazine
Currently playing:
Lords Of Waterdeep
Favourite game of all time:
Strider



NICHOLAS THORPE

It's *Sega Rally* for me. Each of the three stages is fantastically well designed and the different road surfaces really affected the handling nicely.
Expertise:
Owning seven Master Systems
Currently playing:
Flower, Sun and Rain
Favourite game of all time:
Sonic The Hedgehog



PAUL DRURY

I was really taken with *Super Bug* back in the Seventies. I imagined the scrolling track undulating out of the screen and onto the walls of the arcade. I was an impressionable young lad.
Expertise:
Lego Collector's bricks
Currently playing:
Tearaway
Favourite game of all time:
Sheep In Space



STEVE HOLMES

It has to be *Mario Kart 64*, despite the blue shell rage that permeated every race. Bloody blue shell…
Expertise:
Making strange noises
Currently playing:
Max Payne 3
Favourite game of all time:
The Legend Of Zelda: Ocarina Of Time



JONATHAN WELLS

I'm going to go with *Super Mario Kart*; ready, aim, fire! Red Shell glory!
Expertise:
Tackling dirty nappies and retro spreads
Currently playing:
Battlefield 4
Favourite game of all time:
The Secret Of Monkey Island



MARTYN CARROLL

OutRun, easily, although I always struggle to justify why. It's a memory thing, and for me it's just magical.
Expertise:
Sinclair stuff
Currently playing:
Sonic & Sega All-Stars Racing
Favourite game of all time:
Jet Set Willy



PAUL DAVIES

Always going to be *Ridge Racer*, although I know it should be *Daytona*. I was always so shit at *Daytona* though!
Expertise:
Banging my head against a brick wall
Currently playing:
Grand Theft Auto V
Favourite game of all time:
Ghouls 'N Ghosts

LOADING...



So here we are, it's the start of a brand new year and we've got lots of exciting plans for the magazine. I'd also like to tell you about our incredible new website which has been relaunched. It's not only full of great articles, but also allows you to upload your own reviews and collections. Check it out now by visiting **www.retrogamer.net**.

While it's the start of a new year, it's also business as usual at **Retro Gamer**, meaning you're getting a varied slice of retro gaming goodness each month covering a wide range of games and genres.

We're proud to reveal that this month we have exclusive Japanese interviews with Makoto Uchida and Ryuichi Nishizawa. Uchida reveals the creation of his cult arcade hit *Altered Beast*, while Nishizawa recalls the history of Westone, the company he co-founded with Michishito Ishizuka and Hiromi Suzuko.

Other highlights include a 30-year celebration of 8-bit classic *Boulder Dash*, a look at Activision's entire Atari 2600 back catalogue and a Bluffer's Guide to arcade racers, where we've gone under the bonnet and given the entire article a tune-up.

Enjoy the magazine,







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>> Load 124 Breathing new life into classic games

FEATURED



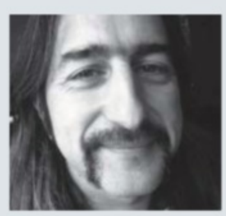
RETRO REVIVALS

SPEED KINGS



In the hot seat this month…





"We planned to use a button to detect pressure"

Makoto Uchida



NEW LOOK SITE!



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www.retrogamer.net

retro radar

GIVE US TWO MINUTES AND WE THE RETRO WORLD



©Official GDC



>> We kick off the new year with news that John Carmack has finally left id Software, the company he co-founded in 1991. We also find time to walk you through Retro Gamer's exciting new website

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CARMACK QUITS

YOU GIVE YOUR VERDICT ON THE DEPARTURE OF ID SOFTWARE'S LAST REMAINING FOUNDER

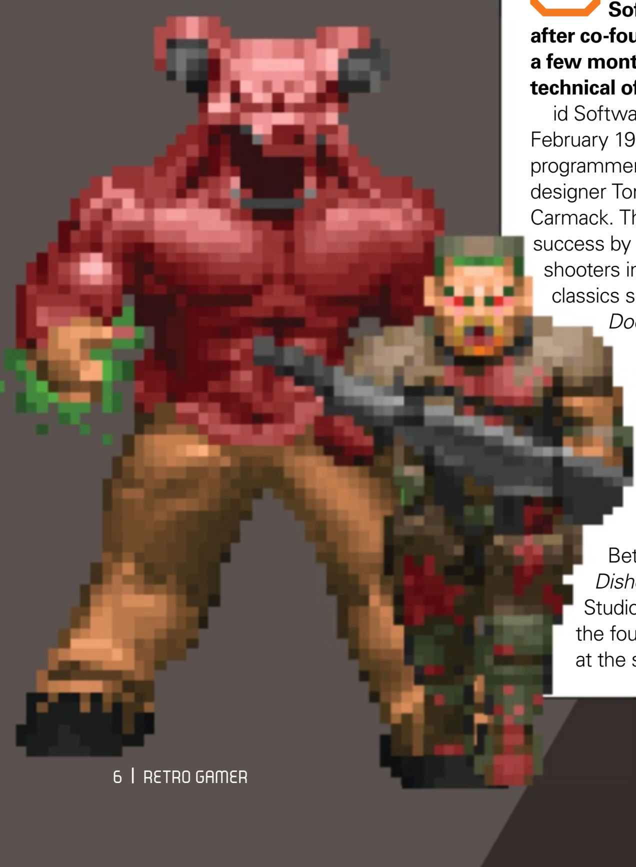
On 22 November John Carmack announced his resignation from id Software nearly 23 years after co-founding the studio, only a few months after becoming chief technical officer at Oculus VR.

id Software was founded on 1 February 1991, with John joined by programmer John Romero, game designer Tom Hall and artist Adrian Carmack. The company found major success by popularising first-person shooters in the early Nineties, with classics such as *Wolfenstein 3D*, *Doom* and *Quake*. John's programming skills were a key component behind these technically impressive releases. The company was bought by ZeniMax Media in 2009, which also owns *The Elder Scrolls* developer Bethesda Game Studios and *Dishonored* developer Arkane Studios. John was the last of the founding members remaining at the studio, following the departures of Tom Hall in 1993, John Romero in 1996 and Adrian Carmack in 2005.

During his career at id Software, John was inducted into the Academy of Interactive Arts and Sciences' Hall of Fame, received two Emmy awards and was given a lifetime achievement award at the Game Developers Conference. Prior to his departure, John's recent releases with the company included the well-received *Rage* and last year's *Doom 3: BFG Edition*. His final completed project at id Software was the id Tech 5 game engine, a successor to the id Tech 4 engine which was introduced in 2004 and used for *Doom 3*, *Wolfenstein* and *Brink*.

It was initially thought that John's position at Oculus VR would not affect his post at id Software. When he joined Oculus on 7 August, id Software's Twitter stated, "Happy to say [John Carmack] is not leaving id and will continue to provide leadership for our games in development." However, the time division proved too challenging to maintain, as confirmed by John's own Twitter statement on his departure: "I wanted to remain a technical adviser for id, but it just didn't work out. Probably for the best, as the divided focus was challenging." John remains keen to be involved with the communities around his id Software releases, saying, "If they don't want me to talk on stage at Quakecon next year, we'll just have to fill up the lobby like the old days."

Tim Willits, studio director at id Software, released the following statement on John's departure: "John Carmack, who has become interested in focussing on things other than game development at id, has resigned from





» [PC] *Doom* remains a landmark shooter that recently celebrated its 20th anniversary.



» [SNES] *Castle Wolfenstein 3D* was the game that kick-started the FPS for many gamers.



» [PC] Take the gun shenanigans of *Doom* and splice them with high fantasy and you end up with the excellent *Quake*.



> **"John Carmack has become interested in focussing on things other than game development"**
> Tim Willits

the studio. John's work on id Tech 5 and the technology for the current development work at id is complete, and his departure will not affect any current projects. We are fortunate to have a brilliant group of programmers at id who worked with John and will carry on id's tradition of making great games with cutting-edge technology. As colleagues of John for many years, we wish him well."

John's primary focus at Oculus VR will be completing the development of the Oculus Rift virtual reality headset. John has been a supporter of the project for a long time prior to joining Oculus VR, first demonstrating the Oculus Rift hardware at E3 2012. The headset, which raised $2.4 million in a Kickstarter campaign last year, was made available to developers in March 2013 but details of the consumer version are currently unknown.

The impact that John's departure will have on id Software remains to be seen, and with id Tech 5 completed, it may well be some time before anyone knows for sure. The immediate impression is that the company and the upcoming *Doom 4* will be missing a key aspect of their shared heritage. "id were one of the few development teams with a recognisable personality at the helm," writes **Retro Gamer** forum member binaryRooster. Fellow member Megamixer felt that "John Carmack's departure on the *Doom* franchise could be a big blow, especially since the next game is stuck in limbo."

While the **Retro Gamer** forum expressed some understandable worries, many members didn't feel that id Software as a team would be significantly impacted by John's departure. "That company has grown up with him and I'm sure it isn't going to implode now he's left," wrote markopoloman, while retrosofer opined that "Carmack leaving was only a matter of time." Taking a long-term view of the situation, RetroBob noted that "they might miss him when id Tech 5 gets old."

The most exciting aspect of John's resignation is that he will be devoting his full attention to the Oculus Rift, with the **Retro Gamer** forum community pleased that John's talents are being channelled into innovative products. Matt_B commented, "I think he's made the right decision. Whilst he's made some great games with id Software over the years, they've not exactly done anything very innovative for a while and he's got a chance to do something really special with Oculus." binaryRooster added "I'm glad that he's going to chase his passions rather than just carry on doing something that his heart isn't in."

With the Oculus Rift inspiring such optimism, we're guessing that John Carmack will be an important name in gaming for many years to come – no matter where he's working.



» [PC] *Rage* doesn't get the love it deserves. It's a delightful old-school shooter with very meaty weapons.

Carmack's career so far

» The legendary programmer's defining moments

1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013

Shadowforge

John Carmack's first videogame was an Apple II adventure, published by Nite Owl. The game was a fairly simple RPG with an overhead view and an expansive map but limited options for interaction. The strong fantasy themes in the game would be revisited in John's later releases such as *Catacomb*, and *Hexen*.



Wolfenstein 3D

Building on the 3D engine that had been utilised in previous releases *Hovertank 3D* and *Catacomb 3-D*, *Wolfenstein 3D* saw players escaping the infamous castle prison and battling Nazi soldiers. The game was a breakout hit for id Software, shifting over 100,000 copies and effortlessly smashing the shareware sales record that had been set by the company's own *Commander Keen*.

Doom

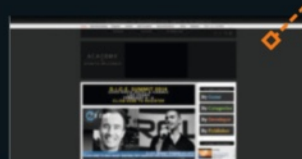
After the success of *Wolfenstein 3D*, id Software upped the ante with *Doom*. Featuring grotesque enemies, satanic imagery and copious amounts of gore, the game stirred up controversy upon release. This didn't stop gamers going crazy for the game, with a million sales paving the way for sequels and even a 2005 feature film starring Dwayne 'The Rock' Johnson.

Quake

The last release from id Software's famous duo of John Carmack and John Romero, *Quake* took the first-person shooter to a new level with full 3D rendering and received unanimous critical acclaim. The game became popular with modders and was one of the earliest games to be recorded for speedrun videos via the Quake Done Quick series.

Inducted into the AIAS Hall of Fame

John Carmack's contributions to gaming were recognised by the Academy of Interactive Arts and Sciences with its most prestigious award, an induction into the organisation's hall of fame. John was only the fourth individual in history to receive the honour, following in the footsteps of legendary developers Shigeru Miyamoto, Sid Meier and Hironobu Sakaguchi.



Rage

John Carmack's last original game was released to a warm reception after a lengthy development period of four years. Set in a post-apocalyptic future that brings to mind the *Mad Max* films, the game added vehicles to id Software's traditional first-person shooting action, with dedicated racing sections adding to the visually impressive shooting.

Joined Oculus VR

Having endorsed the Oculus Rift headset as early as E3 2012 and announcing that the upcoming *Doom 4* would support it later that year, John became the chief technical officer of Oculus VR in August 2013. His resignation from id Software means that he is now working full-time on Oculus Rift, preparing the device for a future consumer launch.



Amazing titles on greatdigitalmags.com

All About History



The January issue of **All About History** includes a feature on Elizabeth I and asks whether she really presided over a golden age or not. The issue also has Hitler's astronauts, ten of history's narrowest escapes and a look at the dark and disturbing tales of witch hunting.

gamesTM



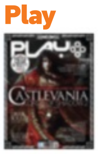
games™ 143 features a veritable cavalcade of exclusive news, interviews and previews as we look ahead to 2014. *Destiny* leads the line-up as Bungie reveals all about its next-gen *Halo* beater, while you'll also find updates on *Titanfall*, *The Sims 4*, *Super Smash Bros* and many more.

X-ONE



Unlock the potential of your Xbox One with the latest issue of **X-ONE** magazine. We've picked apart the new console offering the best tips, tricks and guides to help you get more from the Xbox One. You'll also find previews of *Thief*, *Wolfenstein: The New Order*, *Fable Legends*, *Final Fantasy XV* and more.

Play



This issue, **Play** has gone all gothic in celebration of the superb *Lords Of Shadow 2* – a worthy entry into the *Castlevania* franchise that lets you take control of Dracula himself. There's also a complete history of *Metal Gear* for those confused by its ludicrously complex timeline (everyone then).

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YOUR GUIDE TO OUR BRAND NEW WEBSITE

LEARN HOW YOU CAN BE A CRITICAL PART OF OUR EXCITING NEW WEBSITE

After a lot of hard work, we're delighted to announce that we have a brand new website for you all to enjoy.

We realise that many of you enjoyed our original website, so we have worked hard to ensure that any classic game profiles you may have written have carried across to the new website. This means that there's already a wealth of content to enjoy, but it will continue to expand as we add more classic **Retro Gamer** articles to it.

Of course, the real beauty of the **Retro Gamer** website is that it's also created especially for you, so you have a large amount of interactivity that enables you upload new game profiles, show off your precious gaming collections and tells us what you love about gaming in general.

Prizes will be given out to the best profiles and the best pieces will also appear in the magazine, so don't delay and head on over to **www.retrogamer.net**



GAME PROFILES

1 This is where you are able to browse our extensive games database and add your own choices with our easy-to-follow instructions.

RG PICKS

2 This is where you can look at Future Classics, view the videos we post up or simply add profiles on your favourite retro related items. If you love then let us know.

RETROBATES

3 Proud of your collection? Got a rare game you want to show off to the world? Then share it online and join our growing pool of fellow retrobates.

CLASSIC CONTENT

4 We're aware that not all our readers have been with us from the beginning so you'll be able to read classic abridged content online.

THEMES

5 Decorate the website with a unique gaming theme. So far we have ZX Spectrum, PC-DOS and Commodore 64, but we'd love to hear more suggestions.

JOIN IN

6 There are numerous ways you can interact with the site, whether its visiting our busy forum or simply adding your own game profiles and 'Why I love' profiles.

9 January – 6 February

retrodiary

>> A month of retro events both past and present



11 January 2005
■ The excellent version of survival horror game *Resident Evil 4* gets released on GameCube.



12 January 1984
■ Sinclair Research announced the QL would be its newest addition to the family. It did take another six months for it to appear though…



13 January 1982
■ Ms Pac-Man makes her way to the nearest arcade thanks to Namco and Bally Midway.

13 January 1995
■ The arcade hit *After Burner* is released on the Sega 32X system. It's a pretty impressive conversion as well. Just like *Space Harrier*.





25 January 2003
■ PlayStation 2 gamers see the release of *Devil May Cry 2* on their favourite console.



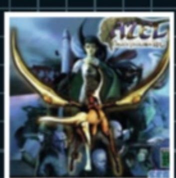
23 January 2013
■ The classic live action videodisc game *Mad Dog McCree* is given a new lease of life when released on the PlayStation Network.



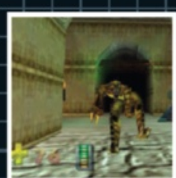
21 January 1999
■ Nintendo's fighting game *Super Smash Bros* makes its Nintendo 64 debut in Japan.



14 January 1987
■ Atari releases its action adventure coin-op game *Skull & Crossbones*.



29 January 1998
■ Sega's shoot-'em-up *Panzer Dragoon Saga* receives its Japanese release.



31 January 1998
■ Acclaim's first-person shooter *Turok 2: Seeds Of Evil* receives its Windows PC release.



31 January 1999
■ Guide Harry Mason in a town called Silent Hill. The survival horror franchise makes its videogame debut on the PlayStation when released in America.



1 February 1982
■ *Turtle Bridge* is released as the latest Nintendo Game & Watch handheld game.



3 February 2000
■ Capcom's survival horror game *Resident Evil Code: Veronica* is exclusively released on the Sega Dreamcast.



2 February 2010
■ *Star Trek Online* makes its worldwide bow as the MMORPG becomes available for Windows PC.



2 February 1998
■ Microsoft publishes its real-time strategy game *Age Of Empires* on the Windows PC.



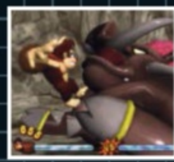
1 February 1983
■ Activision releases its driving game *Enduro* on the Atari 2600.



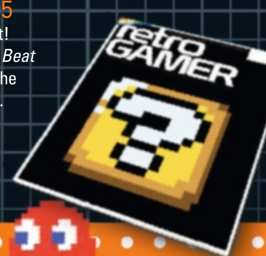
3 February 2005
■ *Oddworld: Stranger's Wrath*, Electronic Arts's action-adventure game, is released on the Xbox.



4 February 1980
■ Clive Sinclair launched his new computer, the ZX80, in kit form. That'll be £79.95 and one soldering iron please…



4 February 2005
■ Get yer bongos out! *Donkey Kong Jungle Beat* arrives in the UK on the Nintendo GameCube.



6 February 2014
■ New issue of **Retro Gamer** hits the streets.

retro columns

>> PAUL DAVIES GIVES HIS VIEWS ON THE RETRO WORLD

Here's my bio…
In 1992 I started out on *Mean Machines Sega* and *Nintendo Magazine System*. In 1995 I became editor of *C&VG*. I led the *C&VG* website from 1998 until Christmas 2000, then I left journalism to be concept design manager at Criterion Games. I returned to journalism in 2002 and from 2005 I've been running my own company, Unlikely Hero.



Hello, retro gamers. My name is **Paul Davies**. I used to be the editor of C&VG and have also worked on a number of classic gaming magazines over the years





Lastability

If you want to know a game's long-term value, retro enthusiasts are by far the best folk to ask. But how good are you at predicting a game's Happy Ever After?

Among the classic *Mean Machines* reviews that I remember, Jaz Rignall's appraisal of *Flicky* for Mega Drive is one that forever stands out. Then, as now, Jaz was a huge stickler for playability and would obsess over *Cosmo Gang* while other members of the *MM* weighed the pros and cons of *StarFox* or *Cybernator*. If you wanted to know if a game was worth playing, pure and simple, as opposed to boasting about any other quantifiable attributes, Jaz would *never* let you down.

It's a standpoint that I've kept in mind whenever I'm asked to stake (what's left of) my reputation on any latest graphics-fest or annual update from big name publishers. It's easy to like something, even love it, when the game is handed to you on a plate. But recommending that somebody spend £34.99 in 1991 let alone 2014… money has always been an object for conscientious reviewers.

"Retarded graphics and moronic sound make it appear like a shambling mockery of a sad travesty," wrote Jaz about *Flicky*. "But try playing it!" He continued. Rich Leadbetter's comment was equally time-capsule-tastic. The game looked beyond basic but was – dare we say it – addictive as hell.

Games journalists have been getting flak lately for not expressing the same love and appreciation for technical detail as your average forum warrior. Problem is, no videogame looks or plays with such contrasting attributes as *Flicky* anymore – at least not those costing more than a quid on iTunes.

I definitely feel this kind of pressure when looking at something like *Knack* on PlayStation 4, but my conscience was troubled when reviewing the likes of *Rocket Knight Adventures* for Mega Drive, and a short while after even with *NiGHTS* for Sega Saturn. My heart told me that these were fantastic experiences, and that I might consider having everyone at my funeral play them to understand what made me so happy (a kind of advanced case of the ill-fated family Christmas get-togethers around the latest console to be met with indifference or worse).

Yet, because these games were only good for a few hours' total play-through, irrespective of how many times you're likely to return for the feel-good vibes, my review score would need to reflect this. Oh the pain, the pain.

I think the courage of his convictions is what marked Jaz Rignall as a celebrated games journalist most of all. After all, if you can't stand up for what you believe in, no matter how trivial, what else is left to say? In hindsight that old *Mean Machines* Lastability rating was inextricably linked to Playability. *Flicky* still looks basic, of course, but this has become part of its retro appeal and the gameplay completes an irresistible retro package. Collectors might also note the Sonic Team connection.

We no longer have a select few gaming gurus in which to place our trust. Instead we have thousands of YouTubers and bloggers, among which I'm very happy to see that it's generally the most sincere that are attracting the most subscribers. Find the ones that put their reputation on the line, and follow them.



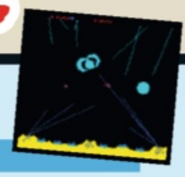
BACK TO THE EIGHTIES



» It's new, it's improved, it'll play 80 per cent of Model 1 software and has two disk drives for convenient conversion of non-working software.

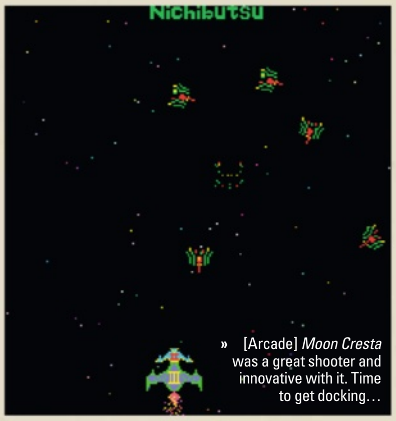
CHARTS

JULY 1980



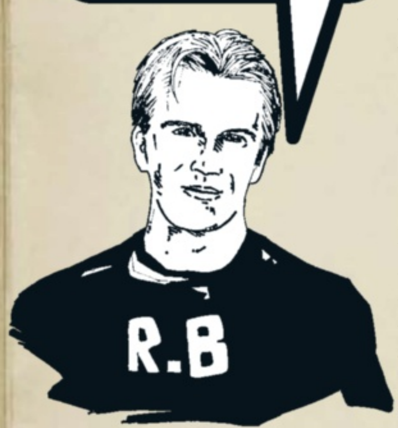
ARCADE

1 Missile Command (Atari)
2 Asteroids (Atari)
3 Galaxian (Midway)
4 Space Invaders Part II (Midway)
5 Space Invaders (Midway)



» [Arcade] *Moon Cresta* was a great shooter and innovative with it. Time to get docking…

JULY 1980 – Space Firebird flies in, Nintendo unleashes Vermin and Fire, Mole Hunter misery, Moon Cresta docks safely, Tandy's Model III arrives and Boxing punches above its weight. Richard Burton swings a haymaker…



THE LATEST NEWS FROM JULY 1980

Newly released into arcades this month was *Space Firebird* by Nintendo. Designed by Shigeru Miyamoto, *Space Firebird* saw you battle against a variety of bird-like spaceships with each taking a different amount of hits in order to be destroyed.

They formed into circling, swooping formations, unleashing missiles and dropping bombs. The action was frantic and fast-paced due to the sheer number of firebirds to destroy and the barrage of missiles to dodge, however you did get one warp mode on each level when the action became too overwhelming.

The graphics were crisp and looked remarkably *Phoenix*-like; however, *Space Firebird* predated *Phoenix* by six months. Sega/Gremlin also released the coin-op in America under licence from Nintendo.

Nintendo released a pair of pocket-sized games with two new Game & Watches. The first was *Vermin*, a mole-whacking game that saw your character, with a hammer in each hand, awaiting the burrowing moles as they broke ground. You had to cleave their heads in before they reached the surface otherwise you lost a life.

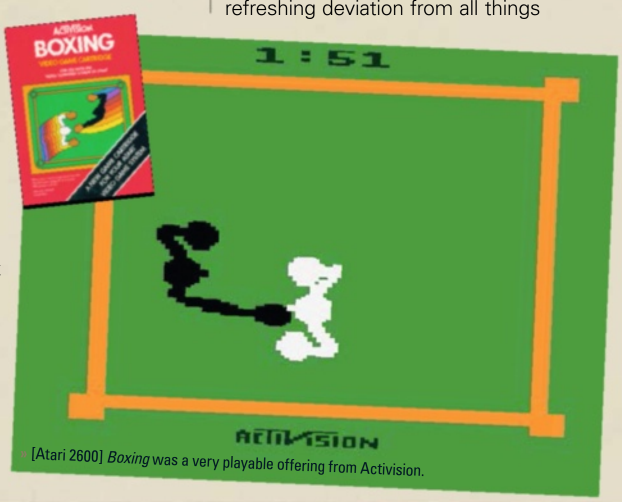
Vermin was a massive hit for Nintendo, becoming the first Game & Watch title to sell over 1 million units worldwide.

The second release was *Fire*, which saw you control two firemen with a bizarrely bouncy blanket catching people from a burning building. As they bounced off your blanket you had to catch them again and bounce them to the safety of an awaiting ambulance. The action sped up considerably with multiple leapers and ended when three of them hit the pavement.

Strangely, there was a second mole-based game released this month with *Mole Hunter*. The synopsis for the game sounded like a rejected Game & Watch title but it was in fact the latest coin-op release by Data East.

There were 16 peanuts and 16 baby moles. These moles wanted the peanuts and your four mole hunters, armed with hammers, were looking to knock them on the head when they emerged from their burrows. A grandfather mole patrolled and appeared randomly, looking to bite your hunter. If successful, you lost a life. If you hammered all 16 baby moles, you could then hunt and kill the grandfather with the game looping back but with a slightly faster setting…

Mole Hunter was a coin-op that didn't need to be made. It was abject videogaming misery and despite its refreshing deviation from all things



[Atari 2600] *Boxing* was a very playable offering from Activision.





TANDY TRS-80	ATARI 2600	MUSIC
1 Temple Of Apshai (Automated Simulations)	**1** Superman (Atari)	**1** Crying (Don McLean)
2 Adventure (Microsoft)	**2** Championship Soccer (Atari)	**2** Funkytown (Lipps Inc)
3 Datestones Of Ryn (Automated Simulations)	**3** Canyon Bomber (Atari)	**3** Xanadu (Olivia Newton-John/ELO)
4 Star Trek (Adventure International)	**4** Circus Atari (Atari)	**4** Back Together Again (Flack/Hathaway)
5 Android Nim (SoftSide)	**5** Sky Diver (Atari)	**5** Everybody's Got To Learn Sometime (Korgis)



» [Arcade] *Space Firebird* was a solid coin-op shooter from Nintendo and Shigeru Miyamoto.

Space Invaders, it was still awful, with Nintendo's *Vermin* the far better option.

Thankfully there was coin-op fun to be had with the innovative 2D single-screen shoot-'em-up *Moon Cresta* from Nichibutsu. What made this game stand out from the crowd was its inventive use of ship docking to build a bigger, more powerful, craft. Should you successfully negotiate the first four alien-filled stages, you would get the opportunity to attempt the docking manoeuvre.

If you could blast through two further stages and a meteor shower stage then a final ship extension would be available to dock with. Of course, what you gained in weaponry you lost in stealth, being so much larger.

Essentially you were carrying all of your three lives with you. Should all three segments of your ship be hit it was game over, although you could win them back by clearing the stages again. Two further stages and it was back to the beginning with the difficulty ramped up.

Moon Cresta sold well and was a deserved success for Nichibutsu. It licensed the game out to Taito, Sega/Gremlin and Centuri who all had their own slightly different variants of the game, mostly in difficulty level and scoring.

There was one further shoot-'em-up arcade game released during July: *Devil Zone*. Imposing as it may have sounded, it was as generic as a *Space Invaders* clone could possibly be. Most surprising was that this was the fifth coin-op game from Universal in what be a set of eight games known as the *Cosmic* series, beginning with *Cosmic Monsters* in 1979. It's amazing to think that it came from the same company that made the amazingly inventive *Mr Do*.

If getting punched in the head repeatedly sounds like a fun way to spend an hour or two then rejoice at the release of *Boxing* by Activision on the Atari 2600.

Programmed by Bob Whitehead, co-founder of Activision and later Accolade, *Boxing* used a top-down view and simplified the sport by discarding the use of rounds. Instead you punched and jabbed to your heart's content for two minutes, with the winner being the boxer to have scored the most points with one point for a long punch and two for a close-in more powerful punch. Knockdowns were not possible, although scoring 100 points would end the game prematurely.

It was exceedingly simple to play, with unsophisticated gameplay and equally primitive graphics yet, as was a regular occurrence with many of Activision's 2600 releases, the gameplay held together pretty well. Positioning also became part of the strategy and, as in the real sport, pinning your opponent into a corner or on the ropes would reap a handsome punch count in your favour.

Tandy released its newest computer, the TRS-80 Model III. It superseded the original Model I machine, although Tandy intended to continue manufacturing it until it was found it didn't comply with the Federal Communications Commission policy on electromagnetic interference

Tandy took the opportunity to discontinue the Model I and push on with the Model III with a starting price of $799. However, later compatibility problems with a difference between the two machines' ROMs led to only 80 per cent of Model I software being able to run on the Model III – although it could be converted to run on the newer machine. Maybe that's why the Model III was the first TRS-80 system to have dual 5.25" disk drives for ease of conversion…



» [Game & Watch] It was head-splatting time for Nintendo with moles, holes and great big spades…

JULY WORLD NEWS

2 July saw the world premiere of the comedy movie *Airplane!* Starring Leslie Nielsen and Lloyd Bridges, the gag fest became a big hit. 'Surely you can't be serious?' We are serious… and don't call me Shirley…

19 July saw the opening ceremony of the Summer Olympics held in Moscow. However, 65 countries boycotted the Games – including the United States – in protest at the Soviet Union's war in Afghanistan.

Great Britain enjoyed some success with a classic encounter in the 1,500 metres between the ultra confident Steve Ovett and Sebastian Coe. Coe won. Britain also won gold in the 100 metres with Allan Wells recording a – by today's standards – pedestrian time of 10.25 seconds. Daley Thompson, videogame licensing legend and destroyer of Spectrum keyboards, also triumphed in the decathlon.



21 July saw the classic album *Back In Black* by rock band AC/DC released. It was their first album since the death of their lead singer Bon Scott in February 1980. The band replaced Scott with Brian Johnson. *Back In Black* went on to become the sixth best-selling album of all time.

24 July saw the death of comedian and actor Peter Sellers. He was best remembered for *The Goon Show* and as the bumbling Inspector Clouseau from *The Pink Panther* movies, although he demonstrated a much broader range of acting in the movies *Dr Strangelove* and *Being There*.

THIS MONTH IN…

SOFTSIDE

SoftSide magazine took a look at an impressive array of new products released by Atari this month. Some of the kit available included a dot matrix printer, a thermal printer, a dual disk drive, a modem, a light pen and 34 brand new software packages. Atari certainly had been a busy bunny…



80 MICROCOMPUTING

Among the technical bumph and type-ins of this TRS-80 magazine, there was an interesting early interview with Scott Adams on how he was inspired to become a text adventure programmer by stumbling across *Colossal Cave Adventure* by William Crowther on a mainframe, and how he formed Adventure International.



COIN CONNECTION

Coin Connection looked at the new *Missile Command* coin-op from Atari and noted that it was the first instance of an arcade game having its play price set at 50 cents for a single game rather than the industry-standard 25 cents. Apparently this was to offset the rising cost of manufacturing…



BACK TO THE NINETIES



»[Arcade] *Raiden Fighters* was a good old fashioned rip-roaring shooter that led left you wanting more.

THE LATEST NEWS FROM NOVEMBER 1996

NOVEMBER 1996 – Sony on top, Tunnel B1 the pits, Nightmare Creatures scarily good, Dead Or Alive and Raiden Fighters hit the arcades and Earthworm Jim 2 is groovy. Richard Burton eats dirt like a nefarious evildoer…

Sony reported that it had sold over 1 million units across Europe with a third accountable to the UK alone. If accurate, this would give Sony just over three quarters of the console market in the UK. Conversely, sales of Sega's Saturn were lethargic with around 90,000 consoles sold.

Sony also reiterated its belief that it would become part of mainstream household entertainment with the PlayStation being around well into the year 2000.

With Nintendo's N64 UK release just four months away, it announced plans to have 100,000 units in readiness for the launch with a further 500,000 in place for the remainder of the year. Was that optimism or hyperbole? Either way, there appeared to be a cracking three-way console war in the offing…

Out this month was *Tunnel B1*, a sci-fi based first-person shooter published by Ocean Software for the PlayStation. At first glance it looked impressive with some beautifully crafted graphics that had gamers slavering over their controllers in anticipation.

In your hover glider vehicle you explored a network of tunnels to locate a super weapon in the hands of your enemy. You had an assortment of weaponry to call on that could be upgraded throughout the game; handy for the umpteen sentry guns, tanks and gliders sprinkled liberally throughout the tunnel system.

With the much-vaunted graphics and backstory in place it was down to the gameplay to complete the final piece of the videogaming jigsaw. Unfortunately, the final piece didn't quite fit. The torturously slow progress through the tunnels made playing *Tunnel B1* hugely frustrating.

The 11 levels were superbly detailed industrialised backdrops but they were all very similar. You would occasionally engage an enemy, but mostly aimlessly loll about looking for inspiration, a sense of purpose or – shock horror – some actual gameplay. Hugely disappointing stuff.

There was third-person action with news that Activision would be publishing Kalisto Entertainment's gothic horror game *Nightmare Creatures* on Nintendo 64 and on the PlayStation.

Its 1834, you're in London and the streets aren't safe. There are zombies and reports of people mutating into monsters after a contagion is released by one-time scientist now-occultist Adam Crowley. You must kill the monsters and find Crowley.



» [SNES] A year older than the Saturn and PSone versions yet it played better.

Nightmare Creatures played the atmosphere card very proficiently with the graphics and the overall feel of the game designed perfectly. While you explored you had to battle with the various monsters that roamed the streets. Avoidance wasn't an option as the addition of an adrenaline bar ensured that you actively looked for fights, as this was the only way to keep the bar topped up.

Nightmare Creatures was constructed well with the survival horror fundamentals executed perfectly, the requirement to

"The newer generation of consoles didn't seem to fully utilise their power"



» [PlayStation] Wander about the tunnels, blast a couple of things then wander off some more. Riveting.



©Evan-Amos



» [PlayStation] Eerie atmospheric 19th Century London is brought to life with monsters and zombies.

NOVEMBER WORLD NEWS

7 November saw the launch of the Mars Global Surveyor spacecraft from Cape Canaveral in Florida, USA. It had several mission objectives including mapping the surface features of Mars and determining the composition of the surface geology.

The MGS would orbit Mars every two hours at a height of 235 miles and would be used to establish potential landing sites for future rover missions. The mission ended almost ten years later when the MSG failed to respond having shut itself down.

12 November saw the debut of the music-themed comedy panel show *Never Mind The Buzzcocks*. Hosted by Mark Lamarr and with team captains Phil Jupitus and Sean Hughes, it quickly became essential viewing with its sarcastic humour and a tendency to demean its guests. It still runs and is currently on Series 27.

18 November saw the worldwide premiere of the film *Star Trek: First Contact*. With an escape pod of the dreaded Borg heading to Earth after having their cube ship destroyed by a Picard-led fleet, the new USS Enterprise gives chase and enters a time distortion ending up in the 21st Century. To stop Earth being assimilated by the Borg, the crew must help Zefram Cochrane to invent the first faster-than-light speed spacecraft.

26 November saw the death of comedian, actor and writer Michael Bentine. He was best remembered for being one of the founding members of *The Goons*, the comedy radio show that ran from 1951 to 1960. He died of prostate cancer aged 74.

actively seek out and duff up monsters was inspired and the exploration and platform elements equally well thought out.

It sold well and received good reviews but did suffer from a slow development process that resulted in a delayed release. A sequel followed later on both Dreamcast and PlayStation.

Earthworm Jim 2 was released this month on PlayStation and Sega Saturn, although Mega Drive and SNES versions had been available for almost a year. This run-and-gun platform game was a sequel to the very successful original that had been developed by David Perry's Shiny Entertainment. In fact, the character of *Earthworm Jim* had become such a success story that action figures and a cartoon series were later produced.

Earthworm Jim 2 was essentially more of the same. Play through the levels with the aim of saving Princess What's Her Name. The obligatory hordes of enemies were thrown at you at every turn including arch nemesis Psy-Crow. While the main basis of the game was run-and-gun and platform, the level designs and how the gameplay varied throughout left plenty of scope for craziness to occur.

Jim had his friend Snot with him who could be used as a piece of equipment to help climb or fall safely. One level saw Jim's head inflated like a balloon so he could float around the level doing his best to avoid pointy things, another level evolved into a game show with bizarre questions and another turned into an isometric shoot-'em-up with Jim flying around on his rocket.

As strange and varied as *Earthworm Jim 2* was, it worked very well indeed with its humour a constant strong point. That said, the newer generation of consoles didn't seem to fully utilise their extra power and their end products didn't seem to be that much of an enhancement over the excellent earlier SNES and Mega Drive versions of the game.

There were a couple of notable coin-op releases in November. First up was Tecmo's release of *Dead Or Alive*, a 3D fighting game that featured some incredibly smooth graphics with particular attention to detail spent on the characters, their physics and the amazing 3D backgrounds.

Dead Or Alive ran on Sega's Model 2 arcade system, the first instance of Sega allowing a third-party developer to use its hardware. The end result was one smooth and playable duff-'em-up and the first game in what would become a long-running and successful franchise.

Raiden Fighters was another coin-op set to have multiple sequels. The fast-paced shoot-'em-up was developed by Seibu Kiahatsu and published by Fabtek, with the game proving to be very popular for its unforgiving and incessant barrage of shooting and enemies.

It consisted of seven levels with each split into three missions and a choice of seven different fighters. Your task was to stop a dictator after engineering an uprising by blasting your way through vast hordes of his minions. It also featured some ridiculously huge end-of-level bosses to dispatch. *Raiden Fighters* was a good old-fashioned shooter that would leave you very satisfied, but with a blistered and throbbing trigger finger…



» [Arcade] *Dead Or Alive* was an excellent beat-'em-up, which is lucky, as there were plenty more in the pipeline…

CHARTS

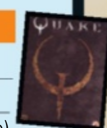
NOVEMBER 1996

PLAYSTATION



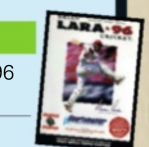
1 Resident Evil (Virgin Interactive)
2 Bust-A-Move 2: Arcade Edition (Acclaim)
3 Alien Trilogy (Acclaim)
4 Ridge Racer Evolution (Namco)
5 Fade To Black (Electronic Arts)

PC



1 Quake (GT Interactive)
2 Z (Virgin Interactive)
3 Grand Prix II (MicroProse)
4 Championship Manager 2 (Domark)
5 Theme Park Classics (Electronic Arts)

MEGA DRIVE



1 Brian Lara Cricket '96 (Codemasters)
2 Micro Machines 2 (Codemasters)
3 Worms (Sega)
4 FIFA '96 (Electronic Arts)
5 Sonic And Knuckles (Sega)

MUSIC



1 Say You'll Be There (Spice Girls)
2 If You Ever (East 17 Featuring Gabrielle)
3 Words (Boyzone)
4 Un-break My Heart (Toni Braxton)
5 Insomnia (Faithless)

THIS MONTH IN…

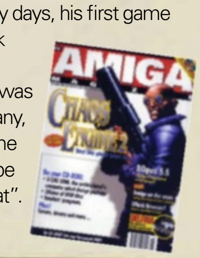
C&VG

There was an interview with programmer Tony Crowther that delved into his Gremlin Graphics era. *C&VG* asked whether he did all the code, music and graphics himself. He did. They asked how long it took to make *Loco* and *Blagger*. He said two weeks. Makes you sick, doesn't it…



CU AMIGA

CU Amiga interviewed Martyn Brown, co-founder of Alternative Software and Team17. He spoke about his early days, his first game Henry's Hoard, his work on the Amiga and how important the machine was to his career and company, ending with, "without the Amiga, there wouldn't be a Team17. Simple as that".



MEAN MACHINES SEGA

The Tokyo JAMMA Show (Japanese Arcade Manufacturer), the world's most prestigious arcade trade event, was high on the agenda this issue. It featured a host of forthcoming coin-op releases including eagerly-awaited titles such as *Virtua Fighter 3*, *Street Fighter Legends* and *Wave Runner*. Coins at the ready.





Phantasy Star IV: The End Of The Millennium

WITH A NAME THAT LONG IT HAS TO BE GOOD

#70

» SEGA » MEGA DRIVE » 1993

Simply put, *Phantasy Star IV* is the best traditional RPG on Sega's Mega Drive. It takes everything that was good about the previous games and improves on them.

The plot and translation are much better quality this time around. The second game didn't bother explaining most of its events, while here any loose ends are intentional. Well, most of them are anyway… All the twists, character development and humour you'd expect from a decent story are actually here this time, and often delivered in anime-style cut-scenes. In fact it's so good it would be a shame to spoil it.

The battle system is miles better too. Highlights include the new macro commands, which allow you to set up your favourite strategies for easy access. There's also the ability to focus on particular enemies, rather than groups. Some of the best additions though are the hidden combination attacks that work at random but are extremely satisfying to use. There are plenty of great bosses this time too.

The music is probably the best a standalone Mega Drive title is capable of, and is better than any of its prequels, with the overworld and battle themes being especially memorable. There are also a few remixes, including the original dungeon theme and Opa-Opa. The graphics are equally impressive. There is no lack of colour in this game, and thankfully you won't see any more palette-swaps in your party.

Phantasy Star IV is still a great RPG and with its availability in several collections and the Virtual Console, everyone can (and should) experience it.



RETROBATE PROFILE

» **NAME:** MICHAEL COOPS
» **JOINED:** 14 SEPTEMBER 2008
» **LOCATION:** UNKNOWN
» **OCCUPATION:** UNKNOWN
» **FAVE GAME SYSTEM:** DREAMCAST

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THE Bluffer's guide TO

How the genre evolved

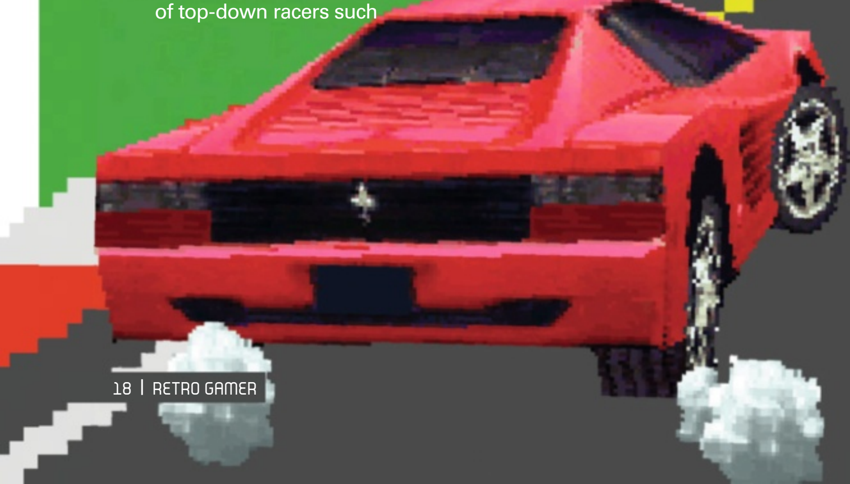
ARCADE

Whether they're in charge of cars, planes or even anti-gravity vehicles, the thrill of taking the chequered flag has drawn the attention of players for decades. Learn the history of this enduring genre and discover why it remains so appealing



With the popularity of real-world motorsports, it's no surprise that racing games have been consistently popular over their long history. Steve Lycett, a prominent name in arcade racing thanks to Sumo Digital's work on the *OutRun 2* home ports and the *Sonic & All-Stars Racing* series, explains the immediacy of the genre: "You don't need to set the scene, explain the story or the controls. Everyone immediately understands that the big wheel thing steers you, the gear lever changes gears to make you faster and you have to keep your foot on the pedal!"

Coin-op manufacturers were producing racing games prior to the introduction of videogames, with cabinets such as Sega's 1969 release *Grand Prix* utilising electromechanical designs to simulate racing. When the arcade boom began in the early Seventies, hardware limitations meant that the earliest games such as *Formula K* were played from a top-down perspective. While this has spawned a rich history of top-down racers such



RACERS



as *Super Sprint* and *Micro Machines*, the genre's major evolution came with the introduction of viewpoints that put the player on the road, allowing a greater sensation of speed.

The earliest racing videogame to provide a first-person perspective was Reiner Foerst's obscure coin-op *Nürburgring* in 1975, which used a frighteningly complex hardware design comprising 28 circuit boards. This pioneering release was seen in a Dusseldorf bowling alley by Ted Michon of Digital Games, who happened to be in Germany fixing problems with the company's *Air Combat* cabinets. Ted was convinced that the *Nürburgring* design wasn't commercially viable to mass produce and set to work on replicating the concept with a simpler hardware setup. The resulting game was *Night Driver*, which had the benefit of Atari's marketing muscle and was able to popularise the use of first-person perspective in games.

The genre's conventions were further established in the early Eighties by one of the genre's most prolific developers. Sega's *Turbo* ▶

ARCADE RACERS: THE TERMINOLOGY

DRIFT
■ A useful racing technique in which drivers cause the rear wheels to lose traction, allowing cars to slide around corners at high speed.

SLIPSTREAM
■ Slipstreaming is the act of following another car, allowing you to gain speed by taking advantage of lower air resistance. It's very useful.

BOOST
■ A way to increase top speed and acceleration in your vehicle. It's usually implemented as a limited-use special feature or a power-up, so use wisely.

RUBBER-BANDING
■ Rubber-banding slows down leading racers and speeds up those lagging behind to keep races nice and close.

ROLLING START
■ A type of race start where all cars begin in motion, rather than being stationary on a starting grid. Sega's *Daytona USA* is a classic example.

CHECKPOINT
■ In many games, a constantly decreasing timer is your biggest enemy. Checkpoints keep you alive with a handy time extension.

AUTOMATIC & MANUAL
■ Gear-changing systems. Automatic is easier, while Manual is often faster and key to mastering advanced driving techniques.

TUNING
■ The act of modifying a car for increased performance. It's started to become a common feature in recent coin-op racers that offer the use of card saves.





» [Arcade] Sega's *Daytona USA* is still great fun and a highlight of many arcades.


» [Arcade] A variety of graphical approaches are popular in the arcade racing genre, with *Buggy Boy* opting for cartoon simplicity.

was the first game to utilise the common third-person view from behind the player's car, and allowed races through a variety of locations, as well as including snow conditions and transitions from day to night. *Turbo* would receive conversions for the ColecoVision and Intellivision and inspired imitators of its own, but was quickly eclipsed by the genre's biggest hit to date from Sega's rivals at Namco.

Released in 1982, *Pole Position* was inspired by Formula 1 and introduced many recognisable elements of the sport to videogames for the first time, from the qualifying lap to trackside advertisements. Namco even used Fuji Speedway, a former Formula 1 circuit, as the in-game course. Providing this level of realism had a huge impact on players, including Steve: "I just remember the cabinet being huge. I'm pretty sure I was terrible at it, but it didn't matter as I could have just sat there mesmerised by the attract sequence pretending to drive." *Pole Position* became a genuine phenomenon, selling over 20,000 cabinets and even having its name licensed for a Saturday morning cartoon series. A sequel quickly followed in 1983, improving the visuals and adding three new courses including Suzuka.

While the genre was advancing quickly in the arcades, home players weren't being left out and the same arcade design sensibilities were being employed in home releases. Activision's 1983 release *Enduro* was a technically impressive Atari 2600 game, employing many of the elements introduced in *Turbo* such as weather conditions. In the same year, the ZX Spectrum received *3D Deathchase*, a motorbike game that introduced combat elements to the racing genre, tasking the player with chasing down and shooting two other motorcyclists in a forest. Trees became increasingly numerous in later levels, dramatically increasing tension. Other combat-based racers would go on to include *Chase HQ*, *Roadblasters* and the likes of *Twisted Metal* and *Carmageddon*, amongst others.

The 16-bit era ushered in a number of new developments in the racing genre, led by a

SELECTED TIMELINE





NIGHT DRIVER
■ Inspired by Reiner Foerst's *Nürburgring*, Atari's release popularised the first-person perspective in the racing genre and gaming as a whole.

TURBO
■ By including weather effects, transitions from day to night and the classic third-person perspective, Sega's racer established genre conventions.

3D DEATHCHASE
■ Spectrum owners were treated to this classic; one of the earliest racing games to feature weaponry.



1976 — 1977 — 1978 — 1979 — 1980 — 1981 — 1982 — 1983 — 1984



SPEED FREAK
■ Vectorlogic's *Speed Freak* was the first racing game to use vector graphics, providing the first attempt at 3D in the genre.



POLE POSITION
■ Namco's smash hit was the first racing game to simulate a real circuit and the first to include a qualifying lap.

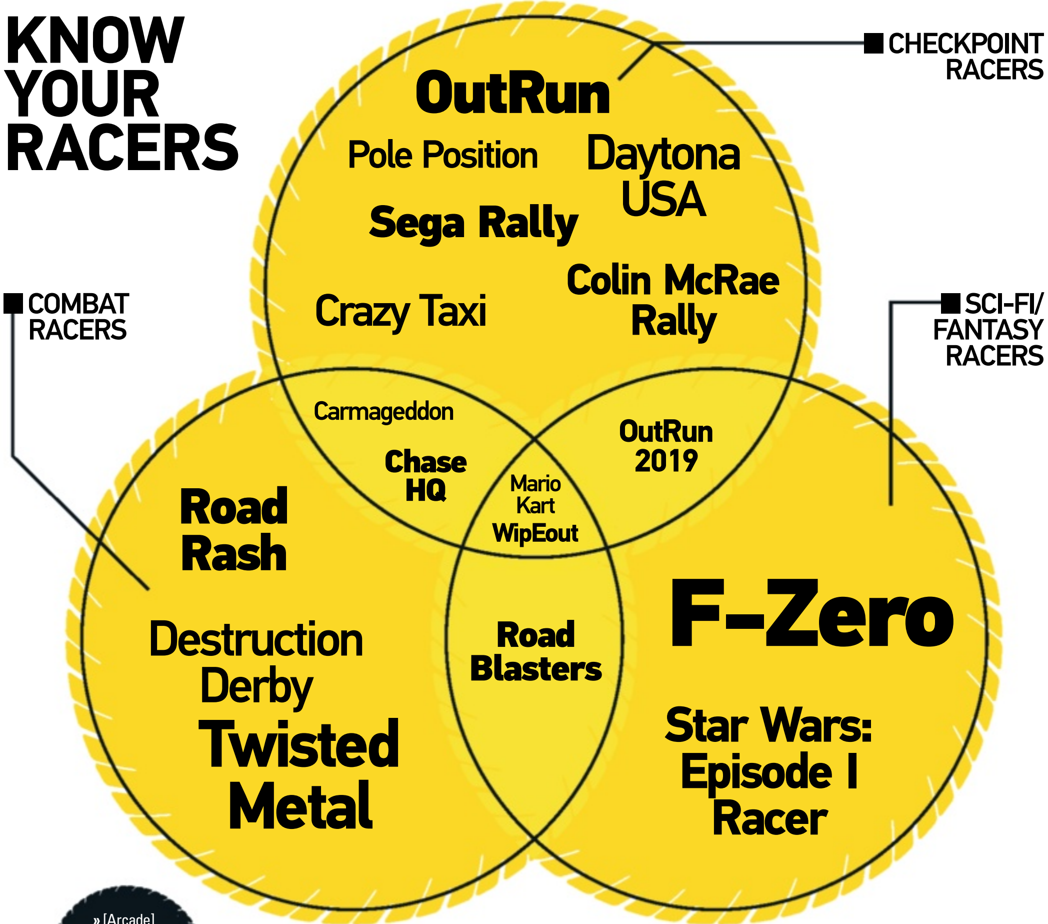
» [Atari 2600] Many Atari 2600 racing games were viewed from overhead, but *Enduro* managed to go behind the car.



» [Arcade] When accidents happen, arcade racers often go completely overboard with the pyrotechnics.



KNOW YOUR RACERS



pair of arcade games from Sega's Yu Suzuki. The motorbike racer *Hang-On* was available in a variety of cabinets, but the most innovative was a full motorbike which not only seated the player, but acted as the controller. Doing away with sticks and buttons, the cabinet instead gave players a throttle to twist and required the bike to be tilted for steering. The concept caught the imagination of the public and remains one of the distinctive features of arcade racing cabinets, living on in modern releases such as Namco's *Dead Heat Riders* and Raw Thrills's *Super Bikes* series. While *Hang-On* was popular, Suzuki's next racing game was even more impressive.

OutRun served as a lesson in how to create the perfect setting for an arcade racing game. Steve has fond memories of the game: "Even before we worked on it, I was always a huge fan of *OutRun*. It was so iconic; choose your favourite tune, get on the road and pick the route you wanted to take. It helped that it was also visually incredible for the time too." The game began in a sunny beach setting and allowed the player to choose their own route through 15 stages at forks in the road, rushing past windmills one minute and speeding through deserts the next. Players could even select one of three tunes on a radio, music which proved to be a huge part of the game's appeal and returned in sequels.



» [Arcade] *Hang-On* was one of the earliest arcade racers where you used a motorbike.

Another hardware innovation during the period was the introduction of linked arcade cabinets. Namco's *Final Lap* was the first game to include the feature, allowing for up to four cabinets to be linked for eight-player races. This was swiftly adopted by many manufacturers, with gigantic multiplayer racing setups becoming the centrepiece of many a seaside arcade in the late Eighties and throughout the Nineties. Recognising the role that these games played as attraction pieces in arcades, manufacturers would later include extra monitors to allow spectators to view ▶

1985 · 1986 · 1987 · 1988 · 1989 · 1990 · 1991 · 1992 · 1993

HANG-ON (1985)

■ Designed by legendary developer Yu Suzuki, *Hang-On* became the first full-body experience game due to its ride-on motorbike controller.

OUTRUN (1986)

■ AM2's sun-drenched racing game introduced selectable soundtracks and a branching road, allowing players to choose their next stage mid-race.

FINAL LAP (1987)



■ Namco's arcade racer was the first to feature the option to link multiple cabinets, allowing up to eight players to race.

HARD DRIVIN' (1988)

■ By utilising 3D polygonal graphics for the first time, Atari Games was able to design outlandish courses including loop-the-loops.

SUPER MARIO KART (1992)

■ Nintendo's most famous spin-off established the popular karting subgenre, quickly spawning a legion of imitators.





RIDGE RACER (1993)

■ *Ridge Racer* was the first racing game to feature texture-mapped polygons, starting a hardware arms race between Sega and Namco.

Bluffer's guide

FIVE ESSENTIAL GAMES

If you need a crash course in arcade racing, these games demand a test drive



NIGHT DRIVER

■ 1976 ■ ARCADE

While it wasn't the first videogame of its kind, *Night Driver* represents one of the very earliest attempts to provide players with a driving game that captured the feel of driving a real vehicle. Atari popularised the use of a first-person perspective in videogames and moved the genre on from the top-down perspective.



POLE POSITION

■ 1982 ■ ARCADE

Namco solidified key conventions of the arcade racing genre with *Pole Position*, which featured the most advanced visuals of its time and an unrivalled sense of speed. It was the first game to heavily draw on real-world influences, featuring Japan's former F1 circuit Fuji Speedway and even examples of trackside advertising.



SUPER MARIO KART

■ 1992 ■ SNES

Super Mario Kart's focus on combat racing cemented it as a multiplayer favourite and defined the entire karting subgenre in the process. Sonic, Crash Bandicoot and even *Castlevania*'s Dracula have taken to the track since, but few rivals have been able to keep up with Nintendo's most enduring spin-off series.



DAYTONA USA

■ 1993 ■ ARCADE

Sega has developed a number of exceptional arcade racers over the years, but *Daytona USA* is arguably the most iconic of them all. It was rare to visit an arcade without a linked set of *Daytona* cabinets in the Nineties, while the game's enduring popularity led to a 2010 arcade re-release as *Sega Racing Classic*.



BURNOUT PARADISE

■ 2008 ■ PS3/XBOX 360/PC

Criterion's fifth *Burnout* game retained the intense speed and spectacular crashes that made its predecessors famous, but took the genre in a bold new direction by adding an open-world structure. Reworking genre conventions expertly, Paradise represents an exciting future for racing.



» [Arcade] Sprite-based games became increasingly complex, with *Power Drift* rotating sprites according to your view.



» [Mega Drive] *Road Rash* included close-range combat, featuring bikers attacking each other with chains and clubs.

▶ the action. The earliest 3D polygonal racing games began to show up in the late Eighties, with *Hard Drivin'* from Atari and Namco's *Winning Run* both arriving in 1988. These games had sparse scenery when compared to sprite-based racers, but they had an easier time representing common course features such as hills and tunnels. In the case of *Hard Drivin'*, the stunt course featured an outlandish full loop and jumps. Home console games were inspired by this approach, such as Geoff Crammond's *Stunt Car Racer* on the Amiga and Atari ST in 1989. These games provided an early hint of the direction that arcade racers would take in the Nineties.

As the 16-bit era gave way to 32-bit arcade machines, developers regularly experimented with new settings for their games and alternatives to traditional vehicles such as cars and motorbikes began to appear. Futuristic hovering vehicles were featured in Atari's *S.T.U.N. Runner* and Nintendo's *F-Zero*. Another Nintendo release, *Super Mario Kart*, put the company's mascot in a go-kart to race against friends and enemies from the series. Including iconic weaponry from homing red Koopa shells to boost mushrooms, the game had such a focus on combat that a multiplayer battle mode was included. *Super Mario Kart* became so popular that a range of imitators followed, establishing karting as a subgenre.

It's fair to say that the 32-bit era started slowly, with games like Sega's *Rad Mobile* taking a similar approach to earlier releases such as *Power Drift*, simulating depth and elevation with scaling sprites. Extra power was largely used to add to the mood, with excellent weather effects and a Sonic the Hedgehog air freshener dangling from the rear-view mirror (which, bizarrely, was the mascot's videogame debut). However, Sega's partnership with General Electric Aerospace provided the company with the Model 1 arcade board, an advanced 3D platform with which it could truly impress. The board made its debut with the release of *Virtua Racing*, the most detailed polygonal racer to date. *Virtua Racing* allowed players to select from four different viewpoints at the touch of a button. "Being able to change the camera to one you liked was exciting at the time, you could literally get right inside the car or pull right back out to see where people were. We take it for granted now, but it was incredible you had this sudden freedom to pick how you viewed the race," remembers Steve.



> **"You had this freedom to pick how you viewed the race"**
> Steve Lycett

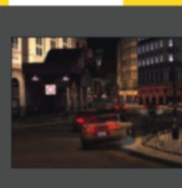
SEGA RALLY CHAMPIONSHIP

■ *Sega Rally* introduced courses that challenged the player to adjust their driving across multiple road surfaces, from mud to tarmac.



DIDDY KONG RACING

■ Rare's karting game was the first to include a choice of vehicles to race courses over land, sea and air.



METROPOLIS STREET RACER

■ As well as accurately recreating the streets of London, Tokyo and San Francisco, *MSR* introduced the style-based Kudos points system.

1994 · 1995 · 1996 · 1997 · 1998 · 1999 · 2000 · 2001 · 2002



GTI CLUB

■ The urban circuits of Konami's arcade racer allowed players to take different streets, challenging racers to find the best route.



SAN FRANCISCO RUSH 2049

■ With the inclusion of a PIN pad on the arcade cabinet, Atari Games allowed players to save their unlocked vehicles.



1993 was an important year for 3D racing games, as intense competition between Namco and Sega provided players with two classic games which changed the dynamics of the genre. While the rivalry coincided with graphical advances, Steve points out that the changes were not merely superficial. "When everything went 3D, it opened to the door to start making the handling models more advanced. For the first time you saw proper drifting in both *Ridge Racer* and *Daytona USA*, that was something you couldn't easily convey with sprite scaling and again, it offered advanced players something to get really good at."

Namco's *Ridge Racer* was the first racing game to display texture-mapped polygons, which made it look markedly more realistic than the 3D games before it and conveyed a sense of location that Steve admires. "I'm a huge sucker for *Ridge Racer*. I've been lucky enough to go to Japan and you can literally see the inspiration for all those overpasses and fantastic skylines in Tokyo." The game included drift mechanics for the first time, allowing players to take incredible lines around tight corners. Sega's *Daytona USA* followed soon after and also boasted texture-mapped polygons and expertly designed courses (as well as some memorable vocals from Takenobu Mitsuyoshi), but crucially included a multiplayer function which set it apart from its rival. Namco responded with *Ridge Racer 2*, a multiplayer version of the original, beginning a rivalry that Steve describes as "like a mini arms race with shiny cars".

WE SPEAK TO… Alex Ward, Criterion Games



What was the first arcade racing game you played?
It was most likely the original Atari *Pole Position* cockpit cabinet. I still like that game. The steering wheel was usually busted which meant that you had to use some sort of super skill to drive.

What are the key elements of an arcade racing game in your opinion?
Bright colours, outrageous roads and incredible drifts. You can have all the 900 degree home steering wheels you like, but absolutely nothing would put a smile on my face like playing games like *OutRun* or *PowerDrift*.

One of *Burnout*'s central mechanics involves taking high-risk actions in order to build up your boost. What was the inspiration behind this idea?
The original inspirations for *Burnout* were the film *Ronin* and the French short film *Rendezvous*. Both showed everyday cars being ragged and driven hard on the city streets of Paris. The boost mechanic came out of a meeting Fiona Sperry and myself had at EA Canada in early 2000. They liked the game and came close to buying it. A very smart guy called Hanno Lemke questioned us on why players would drive head-first into traffic. He challenged us to make it rewarding for the player. From that meeting, we came away thinking 'the more dangerously I drive the faster I can go'.

Criterion has recently worked on the *Need For Speed* series. How do you approach new entries in a series with a strong lineage?
We'd finished *Paradise* when *Need For Speed Undercover* came out. I was reading *Edge* magazine and it scored 3/10. I emailed Frank Gibeau at EA and wrote something like 'three out of ten is a disgrace. You should give that to us. We'd love to do real cars and we'd love a crack at it.' I wasn't expecting a response, but ten minutes later he called and said, 'OK, it's yours'.

Originally I wanted do a very social online-only car game, but people didn't believe in it and early prototypes were poor. We decided to cut our losses and really give the company an obvious winner – which was *Hot Pursuit*. So we went back to the roots – high speed and cops.

The trend for polygonal racers pushed the popular 16-bit consoles of the time to their limits. Both the SNES and Mega Drive required additional cartridge-based processors to cope with their most impressive polygonal racers, *Stunt Race FX* and *Virtua Racing*. When the next generation began in earnest with the 1994 releases of the PlayStation and Saturn, conversions of *Ridge Racer* and *Daytona USA* arrived respectively, which played a key role in shaping public perception of the machines. *Ridge Racer*'s PlayStation release was an astonishingly close conversion, while *Daytona USA*'s low frame rate, pop-up and letterboxing did nothing to dissuade Saturn doubters.

Though arcade ports would still prove popular for the duration of the generation, the ability of the new consoles to provide ▶

» [Arcade] Many legendary developers have worked on racing games over the years. *Cruis'n USA* was designed by Eugene Jarvis.







SPLIT/SECOND: VELOCITY
■ Black Rock Studio's racer allowed players to trigger trackside disasters mid-race to hinder opponents.

SONIC & ALL-STARS RACING TRANSFORMED
■ With courses that could be demolished and flooded, Sumo Digital created a kart racer in which every lap could be unique.

2003 · 2004 · 2005 · 2006 · 2007 · 2008 · 2009 · 2010 · 2011 · 2012



BURNOUT PARADISE
■ *Burnout Paradise* applied an open-world structure to arcade racing for the first time, giving players unprecedented freedom.

BLUR
■ Bizarre Creations attempted to revive arcade competitiveness in the home by allowing challenges to be issued on Facebook and Twitter.



WHAT MAKES A GREAT ARCADE RACING GAME?

Discover the elements that make up all essential arcade racers



COMPETITION

■ Stealing first on the final straight or blasting a friend off the track satisfies the need for spirited competition better than most other genres.

CRASHES

■ When everything has gone horribly wrong, a great arcade racer will let you know with dramatic flips and massive explosions.

SPEED

■ The essential component, the main thrill of any arcade racing game comes from the sensation of travelling at ludicrous speeds.

LOCATIONS

■ From sunny beaches to colourful space highways, arcade racers offer some of the most beautiful scenes available in videogames.

HANDLING

■ Easy for beginners to handle while including sufficient depth for experts, the best arcade racers achieve a tricky balancing act.

VEHICLES

■ Cool vehicles provide important wish fulfilment for the player, be they gleaming sports cars or futuristic anti-gravity racers.



» [GameCube] Futuristic racers are often amongst the fastest, with *F-Zero GX* in particular reaching absurd speeds.

> **"3D opened the door to make the handling models more advanced"**
> Steve Lycett

▶ similar visual experiences to arcade cabinets ushered in new era of prominence for console racing games. Psygnosis's anti-gravity racing game *WipEout* was one of the defining titles of the PlayStation launch, combining weaponry and sophisticated handling with licensed music and a gritty industrial aesthetic designed to appeal to older players. Nintendo employed 3D in the 1996 N64 release *Wave Race 64* to provide a believable sensation of racing on water, something which had been difficult to achieve with sprites. Also on the N64, Rare utilised the space afforded by 3D to add planes to *Diddy Kong Racing*, one of the earliest games to innovate in the kart racing subgenre.

Despite being a genre with a long history, arcade racing has continued to evolve into the new millennium. Sega's *Crazy Taxi* replaced fixed courses and checkpoints with a huge city filled with customers that desperately needed Kentucky Fried Chicken, but eschewed on-track competition in favour of high score competition. The incredibly ambitious Dreamcast game *Metropolis Street Racer* had a unique approach to track design, with the developers accurately recreating sections of London, Tokyo and San Francisco and designing circuits from the streets. It also introduced a skill-based points system, which rewarded stylish driving while penalising careless racers.

In the arcade, depth has been added to games such as Sega's *Initial D* and Namco's *Wangan Midnight* with the use of save cards. Cards are dispensed from the cabinets themselves and allow players to save story progress and tuning options, with the goal being to build the best car to take on other players in head-to-head races. Other games such as Raw Thrills' *H2Overdrive* and Namco's *Dead Heat* allow players to input a PIN, which saves progress to the machine being used. The last decade has seen a number of popular coin-op series revisited, with 2003's sublime *OutRun 2* acting as a standard bearer for high quality revivals. Retaining the forking roads and iconic tunes of the original, the game introduced highly satisfying drifting to the series. The *OutRun 2SP* upgrade added a whole new set of 15 stages, and received excellent home ports as *OutRun 2006: Coast 2 Coast* and *OutRun Online Arcade*.

One of the leading lights of the genre in recent times has been the *Burnout* series. First arriving in 2001 on the PlayStation 2, the original game introduced its signature boost mechanic that encouraged players to take risks by driving into oncoming traffic, getting dangerously close to opponents and, of course, drifting. If the player messed up while building boost, the result was a spectacular crash, complete with damage to the car. Crashing was brought to the fore for *Burnout 3: Takedown*, which focussed on combat without giving the player weapons. Takedowns could be achieved by ramming the opponent into a wall, nudging them into traffic or even landing on them from a jump. *Burnout Paradise* provides the most impressive contribution to the genre in a very long time by implementing an open-world structure in a genre that has historically been confined to closed circuits.

The racing environment has seen exploration as a design space, too. Early Wii title *Excite Truck* included power-ups which altered the landscape, allowing players to create huge jumps or launch opponents into the air. Black Rock Studio's *Split/Second: Velocity* gave us a new approach to combat, allowing players control over scripted environmental disasters to wreck opposing racers and open up new routes. *Sonic & All-Stars Racing Transformed* also features mid-race track changes, with a particularly memorable Skies of Arcadia circuit seeing players take to the air as the roads are destroyed by the background battle.

While arcade racing games remain popular at home, they are one of the dominant genres for new arcade releases. Steve knows this well – Sumo Digital's *Sonic & Sega All-Stars Racing* made the rare leap from console to arcade in 2011. When asked to explain the continued appeal, he finds it easy to explain. "We've come full circle, but it's still a thrill to sit down in a full-scale arcade cabinet, force feedback wheel in-hand, surround sound blaring out and a huge screen projecting the track blazing past you. Who doesn't like to go fast?"


» [Arcade] *Virtua Racing* was the first game to include a selection of camera angles, including this bird's-eye view.

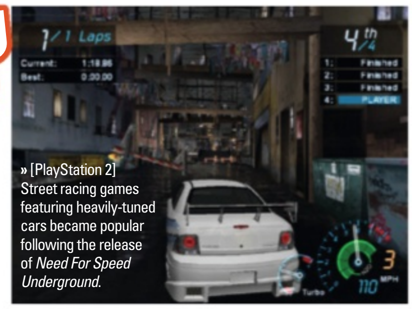


» [Dreamcast] Waterfalls provided opportunities for huge jumps in Midway's speedboat racer *Hydro Thunder*.

Special thanks to Alex Hood at Fun Central arcade in Bournemouth for her help with this article

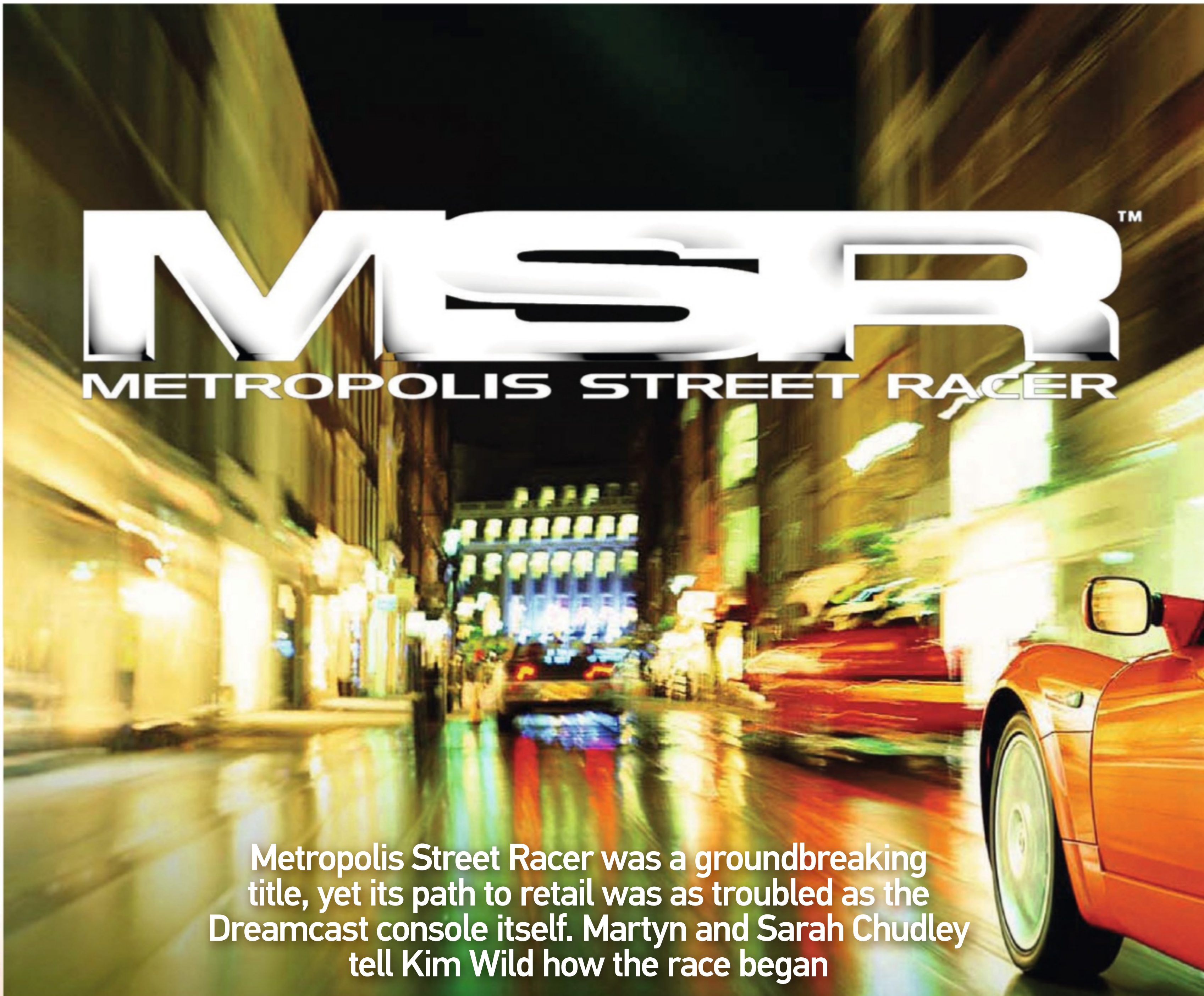
DID YOU KNOW?

1. ***Nürburgring*** **was the earliest first-person videogame and the inspiration for Atari's popular** ***Night Driver*****.**
2. ***Pole Position*** **included Fuji Speedway, and became the first game to use a real racing circuit by doing so.**
3. **The 1985 arcade game** ***Hang-On*****, designed by Sega's legendary Yu Suzuki, was the first full-body experience game by virtue of its motorbike controller.**
4. ***Final Lap*** **was the first game to allow linking of arcade cabinets, giving up to eight players the opportunity to join the same race.**
5. **Sega's 1991 coin-op** ***Rad Mobile*** **included Sonic the Hedgehog's debut videogame appearance as a dangling air freshener.**
6. ***Virtua Racing*** **was the first game in any genre to let you choose your own camera angle, offering four views from bird's-eye to in-car.**
7. ***Ridge Racer*** **went against the grain by omitting multiplayer, though competition in the market soon saw Namco update the game to include it.**


» [PlayStation 2] Street racing games featuring heavily-tuned cars became popular following the release of *Need For Speed Underground*.



» [Arcade] The biggest addition to *Turbo OutRun* was the ability to turbo boost.



Metropolis Street Racer was a groundbreaking title, yet its path to retail was as troubled as the Dreamcast console itself. Martyn and Sarah Chudley tell Kim Wild how the race began



IN THE KNOW

- » **PUBLISHER:** SEGA
- » **DEVELOPER:** BIZARRE CREATIONS
- » **RELEASED:** 2000
- » **PLATFORM:** DREAMCAST
- » **GENRE:** ARCADE RACER

The story of how Bizarre Creations came to work with Sega is just as memorable as the game itself. After visiting ECTS in 1997, and impressed by Sony's *Formula 1* series, Sega's Kats Sato pulled the plug out of the PlayStation running the game so he could view the start-up credits. The developer was Bizarre Creations. With the prospect of five years of *Formula 1* games on the horizon, the team decided it was the perfect opportunity to branch out. "It was great as we were always huge fans of [Sega], and we got the chance to get to know their team and meet some of their most famous designers – most notably one of the nicest guys in the industry, Tetsuya Mizuguchi, and we were present at the late Kenji Eno's Dreamcast D2 announcement, which was awesome." recalls Martyn Chudley, Bizarre Creations' founder. "The guys we had contact with on a regular basis such as our producer Kats Sato, Naohiko Hoshino, Kazutoshi Miyake and Jose Aller were/are all great guys."

Yet despite being hired to create a new racing title, the form it would take was to be decided. Talk of Sega obtaining the Ferrari licence (codenaming the project 'Crimson') failed to come to fruition and even an idea of an *Italian Job*-style Mini-based racer was considered. In the end, the team favoured the world of sports cars. "We wanted it to be a little different so focussed on convertibles and lower-end, affordable cars – cars that were more realistic for the gamers to own or aspire to own, rather than the high-end playboy style of 'exotic' cars," explains Martyn about *MSR*'s range of vehicles. "We loved the idea of having convertible versions of the cars as the roof-on-or-off versions were based on weather and time of day settings, and we also did territory specific versions of cars such as the VX220/Opel Speedster, Mazda Miata/MX5/Eunos Roadster and Nissan Fairlady Z/300ZX – this gave a real sense of ownership and made the cars feel special."

The game was based upon the *Sega Rally* school of handling and a basic design was written down but still incomplete. At this stage the concept was for a street racing title akin to *Crazy Taxi*, including checkpoints and crates that could be driven into, throwing more than a nod to American cop TV shows. Work on an early internal technical demo in September 1997 (by the initial team of six programmers, four artists and four support staff) based on Trafalgar Square led to the decision to incorporate major cities into the game, including London, San Francisco and New York. "Each of them ▶



» A team photo of the core members behind *Metropolis Street Racer* including a more youthful Martyn Chudley.

» Sega formed a relationship with a car manufacturer to have the VX220 car feature on promotional materials.



» [Dreamcast] Even when driving it's possible to recognise shops from their real-life locations.



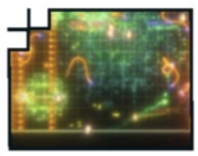
» Photos such as the above were among the thousands captured to research locations for the game.

were the best-known, iconic cities in each of Sega's main territories," explains Martyn about the design decision. "Sega also had offices and people locally who could help with research. London is a cool, world-wide known location, there were loads of iconic car-chase movies set in San Francisco and Tokyo was renowned for its car culture and 'Rice Racers'. Sometimes we did wonder if our street racing games were picked from the holiday lists of the designing artists! Our personal favourite has to be Tokyo in terms of visiting and research – what an amazing place! And even now when we're in London, we're still mentally driving the game!"

One of the most remarkable aspects of *MSR* was not the decision to feature cities but to recreate them down to the finest detail. As a result, considerable amounts of photos needed to be captured. "It was over 40,000 in the end, all taken traditionally with film and SLR cameras." recalls Sarah Chudley about the mammoth project. "[They were] printed out, catalogued and stored in big boxes round the studio! Of course, there were many photos that weren't quite right, taken to duplicate areas and a surprising number ended up being taken of pretty girls which ended up on the walls next to the artists…"

Lee Carter, an artist for the game, recalls the experience. "A lot of work was done before any modelling or texture work. The initial researching of the routes, height data, flying out to the locations to photograph every building, road surface and street furniture, then getting back to organise the actual artwork. A lot of work was re-built and remade as we got better as time went on. I personally had a trip to Tokyo with another artist, spending a full week photographing everything from lampposts to paving stones. It wasn't a holiday as we even photographed the same buildings at night too."

There were downsides to this methodical approach to photography however, as during a research trip to Japan, one of the research photo reels was dropped between two lift doors, 30 stories high, and bent beyond all recognition. "The worst bit was that we had no idea which film/area it was until it was developed! Thankfully we had Sega's people to help replace the missing photos!"



DEVELOPER HIGHLIGHTS

FORMULA 1
SYSTEM: PLAYSTATION
YEAR: 1996

FUR FIGHTERS
SYSTEM: DREAMCAST, PC
YEAR: 2000

GEOMETRY WARS: RETRO EVOLVED 2
(PICTURED)
SYSTEM: XBOX 360
YEAR: 2008

Sarah recalls, discussing the potentially disastrous incident.

While considerable research went into the look of the cities, care and attention also went into the actual cars. Rather infamously, the team hired a Mercedes SLK in order to capture engine recordings with microphones. Unexpectedly, the engine blew up, with the car then towed into a country lane so the AA could be called. Unfortunately for them, the hire company worked out what was going on and sent Sega a large bill. Interestingly, Sega was quite amiable over the whole incident. "We were shielded from any 'blame' by Sega, which was appreciated!" remembers Martyn. "I can't remember off-hand but we did record many of the cars to get a good range of accurate SFX and engine types, although there probably were a few duplicates used."

Lee Carter was involved with the creation of textures for the cars featured in the game. "Car textures were hand-drawn. I drew a side profile of the car; lighting and shading included in the texture themselves, almost like an airbrush drawing. Fitting the side, front, back and top textures together was quite hard at first, but towards the end we got so good at it we had to start again, as the first textures didn't look as good as the newer ones."

Although the initial schedule was to be launched in August 1998, the scale of the project meant this wasn't realistic. Heading into 1999 and known as *Metropolis Street Racer* ("Metropolis means urban area, we added 'street racer' to make sure people knew what type of game it was. We wanted it to be *Street Racer*, but Ubisoft already had that!") the team needed to develop a demo for E3. At this point the lead coder of the game left the company and a senior artist moved away from Liverpool. It became increasingly apparent that MSR wouldn't make the launch date for the Sega Dreamcast. With game code incomplete but also not up to the title's ambition, a re-write was in order, hindering development further.

PLAYING THE JOKER

Why all work and no play isn't the way to make great games

Despite the tortuous development process, the team still managed to have fun, especially with the producer Kats. "There were always practical jokes played on him, mainly due to his reluctance to ever make the tea," recalls Martyn Chudley. "So how do you explain piles to a Japanese person? Give them a bunch of grapes. Then we left him holding them for about three-quarters of an hour whilst on a phone call to his boss, arm outstretched and drooping. Eventually we had to explain you 'get these up your bottom' and holding them was just for our own gratification". One amusing addition came from Walter, technical director, who decided to make the AI cars beep their horns upon crashing. "More gallows humour from some tired people in 'crunch' time. It would have been amusing if it wasn't something he put in on the night we were mastering!"



THE INFLUENCE OF MSR

The modern racers that share DNA with Bizarre Creations' superb game



FORZA HORIZON

■ As well as neatly recreating real-life locations to drive around, this open-world racer features an in-game radio station and a multitude of objectives that can be accomplished by performing certain driving manoeuvres during races or off the track to gain prestige or sponsorship.



JUICED

■ A street racing-based title, *Juiced* uses 'respect' points as a means for progression. Respect points could be earned from performing stunts in events, customising your car and winning races. It was also possible to gamble your car against another, much like the ability to gamble Kudos credits in *MSR*.



BURNOUT

■ Criterion's flagship driving series started out with a points system where driving dangerously or in a stylish manner earned you more points that would eventually lead to a full boost bar. Later games in the series would build upon the concept, including a Crash mode where the aim was to smash your car and cause ultimate destruction.



RACE DRIVER: GRID

■ Both the original *GRID* and its sequel used the concept of reputation points: driving skilfully in different events to progress your career. Harder difficulty levels had more reputation points available for you to earn. Mastering the drift button was the key to building up large point combinations.



MIDNIGHT CLUB

■ A street-based arcade racer, *Midnight Club* follows in *MSR*'s footsteps by recreating cities to drive around in a bid to build up your reputation among the crew members. Each game in the series refined the concept, with the third game incorporating motorbikes, something Bizarre would later explore with *PGR4*.



FORZA MOTORSPORT

■ Although geared as a simulation, later games in the *Forza Motorsport* series, in particular *Forza 3* and *Forza 4*, enabled players of all skill levels to progress with an adaptable difficulty level. This included braking and cornering guides to help you find a neat racing line, progression in the form of driver levels (chapters) and car customisation.



SPEED KINGS

■ Although a fairly unimpressive motorbike combat game, *Speed Kings* used a points system, where points were gained from successful fisticuffs against other riders, powersliding under trucks and performing other such skilful acts on two wheels. A modern day *Road Rash* – only a bit rubbish.



TEST DRIVE UNLIMITED

■ Going one step further, *TDU* re-created an entire island, where every detail could be seen and it was possible to recognise roads from real-life locations. Every car had its own mileage counter, animated drivers and an in-built radio station to enjoy while racing or exploring the island's many secrets.



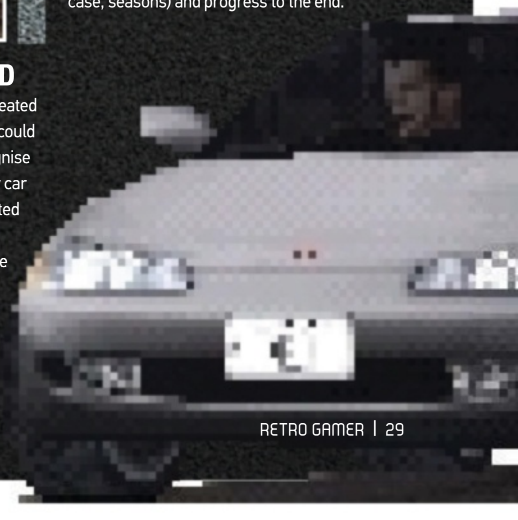
NEED FOR SPEED: SHIFT

■ *MSR*'s point system is apparent in *NFS: Shift* only with a twist. Drive accurately around corners and overtake skilfully and precision points are earned; be more physical against other cars and aggression points are yours. *Shift 2* developed this concept with experience points where the race wasn't just about winning.



SPLIT SECOND

■ This explosive racer may not on have much in common with *MSR* on the surface, but game progression relies on the player earning 'power plays' used to trigger explosions, accomplished by driving stylishly and with skill. Credits are then earned to unlock chapters (or in this case, seasons) and progress to the end.



BIZARRE RACING More hit driving games from Bizarre Creations



FORMULA 1

■ Licensed *Formula 1* titles had until this point been something of a mixed bag, but Bizarre Creations' work made this an impressive game with its realistic handling, intelligent opponents and authentic car models. The backing of a licence with official tracks, racers and the intrepid Murray Walker sealed the deal.



FORMULA 1 97

■ Although it was a sequel to an ambitious title, *F1 97* managed to improve upon the original with neatly refined visuals, audio effects and more intelligent drivers. It would turn out to be the title that gave Bizarre Creations the opportunity to work on a new racer and leave a five-year contract of *Formula 1* titles.



PROJECT GOTHAM RACING

■ The first game in the series to use Xbox Live, players could challenge other racers around the world. Several expansion packs adding tracks based on Paris and California were released through the service. *Project Gotham Racing* was a revelation upon release, and Microsoft founder Bill Gates went as far as to name it his favourite videogame.



PROJECT GOTHAM RACING 2

■ The first game in the series to use Xbox Live, players could challenge other racers around the world. Several expansion packs adding tracks based on Paris and California were released through the service. It also featured hidden mini-game *Geometry Wars* in the garage, later re-built onto Xbox 360's Live Arcade.

"The code was written to create a demo for the show, but lacked a lot of structure needed for a full game. The coder had worked on *F1 97*, but *F1 97* already had a lot of game-logic framework in place from the original. Being on a new platform, for a new publisher, *MSR* had to be built from scratch. However after the show and the subsequent re-design and re-focus, we realised a complete re-write was needed in order to put in flexible systems to link with the 'unique' game structure, UI, AI and scoring mechanisms." says Martyn. "However the biggest (and first!) improvements that we made were to up the polygon counts in the cars and make the camera viewpoint more realistic – the code we were left with had this super-stretched *WipEout*-style camera, which added to the speed but made you feel like you were on acid! As soon as the camera was 'brought in' the game felt about ten times more realistic and set us on a really good path – before this we were just looking at 'another' arcade racer – after this we started down the innovation/realism route and all the cool features such as Kudos were born. The coder leaving hurt us at the time, but it probably made us in the end!"

The most innovative addition to *MSR* that has gone on to influence many racing titles was the Kudos system. "We wanted a name that showed you were gaining respect for something from your peers, and Kudos ('acclaim or praise for exceptional achievement') seemed to fit the best," explains Sarah. "It's funny, as it's a singular word in nature even though it sounds plural ('Kudos is due' rather than 'Kudos are due') but the Americans, even in their marketing and manual, think it's a plural, and said you could earn 'one Kudo' for something!" Kudos is the currency system upon which all actions of the player earn or lose points and style of racing, not just winning, is important. "Kudos was actually born out of an incident that Martyn had whilst 'racing' his MR2 against an Fiesta XR2 on the M62 – his car ended up a little sideways, and all Martyn could think of was 'Wey Hey!' and not 'I'm going to die'. From this Martyn realised it wasn't about going fast or even 'winning', but it was *how* you drove that gave you the buzz," continues Sarah.

Yet innovations didn't just lie at the heart of the Kudos system. The clever use of the Dreamcast's clock meant racing at night in real time would be replicated in-game and across time differences for other cities. The amount of detail included was staggering, with a milometre for each car, animated drivers and personalised number plates among a few others. "Don't forget (trying to blow our own trumpets here) weather, car showroom, radio stations, variety of game-modes, online functionality including leaderboards (way before Xbox Live) and VMU challenges!" adds Sarah. "We really did try and push the boat out and innovate as best we could for both ourselves and Dreamcast, to the point of biting off a little more than we could chew! The Kudos and gambling ideas Martyn was especially proud of – it made the player in charge of game



» [Dreamcast] "One of the driving factors for the artists was they all wanted to create something that pushed boundaries."



» [Dreamcast] Bizarre Creations did a wonderful job of capturing the look and feel of a city environment.

KNOW YOUR BRANDS

- ALFA ROMEO
- AUDI
- FIAT
- FORD
- HONDA
- JENSEN
- MAZDA
- MERCEDES
- MG



PROJECT GOTHAM RACING 3

■ A launch title for Microsoft's new Xbox 360 console, *PGR3* contained four cities (Las Vegas, London, New York and Tokyo) boasted over 80 cars from 30 manufacturers, improved on multiplayer modes with additional scoreboards and tournaments both off and online. It also included arcade title *Geometry Wars: Retro Evolved.*



PROJECT GOTHAM RACING 4

■ The final game in the series, the fourth iteration added the much-demanded motorbikes, real-time weather conditions during races and a revamp of the Kudos system. Like all aspects of *PGR*, even weather conditions could be customised before a user-created race. Despite its age, *PGR4* is still highly enjoyable.



BLUR

■ The last racing game to be developed by Bizarre Creations, *Blur* was a well-built arcade racer that merged real cars with futuristic weaponry and planted a focus on multiplayer battles. Social networking features such as being able to link with Facebook and Twitter was an idea ahead of its time.



» Sega gained permission to shut down a street in order to race a VX220 against a Fiat Turbo for marketing purposes.

"We really did try and push the boat out and innovate as best we could"
Sarah Chudley

progression in a way that hadn't been done before, some of our biggest differentiators."

The use of a fictitious radio station added to the appeal. "Our audio coder/designer Nick wanted to include real music, but to make it as realistic for those driving round the cities as possible. What's more realistic than listening to an actual radio station from that location? The DJs and song choices added to the reality of the game. Richard Jacques did a great job working with us on this." says Martyn.

As 1999 progressed, times became more stressful for the development team. Some people were working over 40 hours of overtime every week over a period of 14 months, and the entire game was far from completion. "It's impossible to describe the hell other than to have been there," says Martyn. "But with takeaways provided every night (we earnt 50 per cent discount from the local pizza place due to being 'good customers!'), Red Bull by the truckload and the horrors of a small office with no air-con, you can imagine."

During the final stages, the first set of master discs were burnt, each taking an hour to create on the Dreamcast's GD discs to prevent write errors. It was here they discovered the first major error with demo loops where cars would crash into each other randomly. Once Walter Lynsdale, technical director, hacked the code to restore car behaviour, another set of discs were burned. Yet another problem emerged, where the music from the front end disappeared having been previously disabled by a programmer. Once fixed, the next set of final discs had to be burnt and then tested at 6am at the exact time of a thunderstorm.

"The last disk was burned after a double all-nighter, but as it had to be sent off at 9am, there wasn't time for a final test cycle other than basic tests. The game was too big! At this point, Martyn – who had been awake for 48 hours solid coding and bug-fixing – had to leave the office leaving Kats and Pete in charge," remembers Sarah. "Martyn had to drive home during said storm – with Brian (producer) in hot pursuit (as he was to be the best man) – in order to leave home for the airport at 7am to fly off to Crete to get married! Obviously there was one more drama – the fully-laden car refused to start meaning Brian had to cram everyone and everything into his car and tear off to the airport!"

Metropolis Street Racer finally hit the shelves in December 2000, during the Dreamcast's last Christmas. With sales of only 120,000, the game fared poorly; not helped by the lateness of the title, the decline of the Dreamcast and major bugs that were found in batches of the game, leading to a recall. Despite the game's difficulties, both Martyn and Sarah remain proud of their achievement. "It didn't sell particularly well, it was late and stressful, but it was a game we all were particularly proud of for pushing the envelope in terms of design, graphics and audio." *Metropolis Street Racer* may not have been the launch title originally intended, but its legacy continues, living on in the spirit of Bizarre's very own *Project Gotham* and many other popular arcade racers.

Special thanks to Stefan McGarry and the Chudleys for their help with this article

MITSUBISHI
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QUESTION
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RENAULT
TOYOTA
TVR
VAUXHALL



» [Dreamcast] £1 million had been invested into *MSR* but thankfully teaming up with Microsoft kept the company going.



» [Dreamcast] Despite the Kudos system, *MSR* was often mistaken as yet another city racing game.

A MOMENT WITH...



Roy Fielding

Paul Drury talks to Roy Fielding, whose two decades in the industry have taken him from dinosaurs at Ocean to bricking it at Traveller's Tales

Who is Roy Fielding?

An active member of the C64 demo scene in the Eighties, Roy coded *Hektic 2* in his bedroom before joining Ocean. His work has included *Jurassic Park 2* on the SNES, *Silver* for the Dreamcast and PC, the PSP's *WipEout Pulse* and over a dozen *Lego* titles for various handheld consoles.

How did you get into coding?
Demos were what initially drew me to the C64. My mate Lee Clare showed me some from the likes of Meanteam and Kernal and I was hooked. I ended up doing some simple demos under the name Toy for the likes of Tetragon, Sub Zero and, my favourite, *Moonscape* for Cross.

Were you coding games too?
I did *Sentence* for the C64 with my mate Paul 'Wiz' Johnson, who now sits opposite me in the office at TT Fusion. It was a cobbled together affair with pretty awful graphics and the ugliest code ever, but it worked and I see it as part of my growth!

In 1992 you got a job as a tester at Ocean. Was it a dream job for you?
It's not all it's cracked up to be. You start testing a product long before it's anywhere near fun, playing the same section for hours and I was writing all the bug reports out in long hand on paper in a room full of smokers. But it beats mopping up poo for a living and I had a foot in the door!

What was life like at Ocean?
I pestered them to give me a try out as an artist and Gary Bracey kindly put me on *Jurassic Park 2* on the SNES to do some sprite work. I was an artist at Ocean! Dreams can come true! It was a wonderful time, working with truly talented people but when we were bought out by Infogrames and the logo changed, a little piece of me died inside. Like when Gary left, it just felt wrong. Things were never the same.



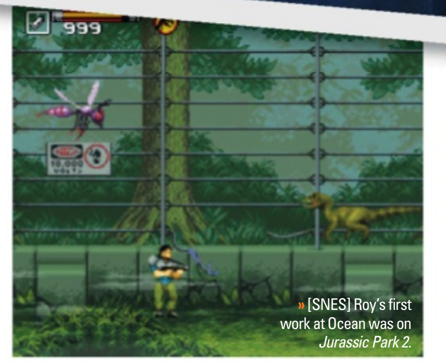
» [C64] Roy started out making C64 demos, his favourite being *Moonscape*. We can see why…

> "You start testing a product long before it's anywhere near fun"
> Roy Fielding on his testing days at Ocean

Which of your games would you recommend to our readers?
Out of my C64 offerings, it would be *Hektic 2*, and I'm quite proud of the DS version of *Lego Clone Wars*. My son, Tom, played that game to death! What new IP would be good for the Lego treatment? I'd like to see the *Back To The Future* trilogy done.

What's your proudest achievement in the games industry?
Seeing *Lego Star Wars: The Complete Saga* do well on the DS. I got my first collector's brick for that and I have one for each *Lego* title I've worked on since. I think I'm up to 13 now and they stack up to make a nice Lego brick wall.

And your biggest disappointment?
Silver. Four years and a lot of effort went into the game but it came out a year or two later than it should have. If it had come out sooner, I think it could've been a big hit.



» [SNES] Roy's first work at Ocean was on *Jurassic Park 2*.

Is there another industry veteran that you particularly admire?
I'd have to say Jonathan 'Joffa' Smith. All I need to back that statement up is *Cobra* on the ZX Spectrum.

How has the industry changed during your time in it?
I miss the old days when technology didn't matter so much and it was all about making the most out of limited power. The homebrew brigade interests me. Vinny Mainolfi and Frank Gasking got me back into the C64 retro scene and now I have a new bread bin C64 with a wonderful 1541 Ultimate 2 cartridge, which I hadn't even heard of before! I'd love to do *Hektic 3* just for the fun of it.



» [C64] Roy contributed graphics to the original *Hektic* and coded the sequel himself.



» Roy's impressive Lego collector's brick wall


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HOW ACTIV REWROTE



Activision turns 35 later on this year. To celebrate the occasion Darran Jones spoke to David Crane about the publisher's inception and revisited the 44 games it released on the Atari 2600

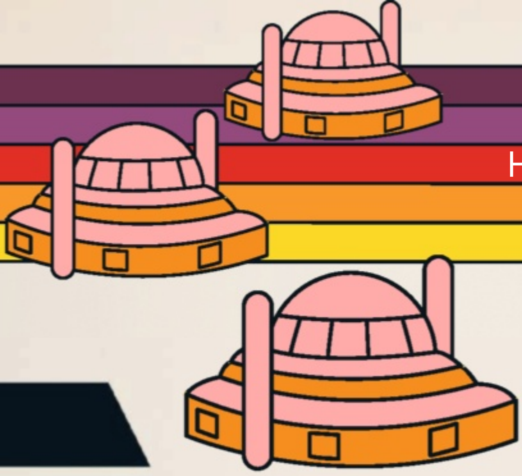
Today Activision is one of the largest videogame publishers in the world, with a fortune worth billions and ownership of several key franchises, from *Skylanders* to *Call Of Duty*.

Back in 1979 however, franchises like the above weren't even a consideration for David Crane, Larry Kaplan, Alan Miller and Bob Whitehead – the quartet just wanted to be recognised for all the hard work they were doing. Back in the Seventies, third-party developers simply didn't exist – games were created by the publishers behind the consoles. Therefore, if you wanted to make games for consoles like the Atari 2600 you either worked for Atari Inc, or didn't make games for it. As a result engineers and programmers quickly flocked to companies like Atari Inc, eager to be involved in what was becoming a rapidly expanding, and very profitable industry.

While working at companies like Atari Inc gave programmers access to cutting-edge technology and granted a fair amount of freedom, not everyone was happy with the working conditions, particularly when games started selling in their millions and creating millions of dollars for Atari Inc – dollars that the games' creators weren't seeing.

"Atari's biggest problem after the purchase by Warner was the New York-based parent company's complete lack of understanding of Silicon

» David Crane proudly showing off some of his best Atari 2600 games.



ISION



VIDEOGAME HISTORY



» [Atari 2600] *Bloody Human Freeway* came to David when he saw a person desperately crossing a busy road. It eventually became *Freeway.*



» [Atari 2600] *Chopper Command* was a fast-paced shoot-'em-up in the style of *Defender.* Activision often looked to the arcades for inspiration.



» [Atari 2600] Games such as the excellent *Dolphin* were typical of the innovation and fresh ideas found at Activision.

Valley," explains David Crane, one of the four colleagues who would go on to form Activision. "The creative and technical wizards in the labs at Atari were making the company hundreds of millions of dollars. We loved doing it, and probably would have continued doing so with a little recognition."

That recognition just wasn't forthcoming however, and programmers became increasingly disgruntled. Atari Inc was well known for not allowing the credits of its programmers to be in games, and it's equally well known that developers would go out of their way to try and hide their credits in their games, with Warren Robinett's *Adventure* and the names written on the side of the Death Star in *Star Wars* being just two examples of the lengths they would go to. It appeared that Atari Inc realised the value of its staff , but it didn't value them enough to pay higher wages. For many, the departure of Nolan Bushnell was the final straw.

"The department in Atari that was making the game consoles and game cartridges had a handshake deal with Atari management to set aside a tiny fraction of revenue – ten cents per cartridge and 25 cents per console – for a discretionary fund with which to award the hard work of the creative people," reveals David. "After Nolan's departure, Atari management denied ever hearing of such a thing and screwed the team. That was a turning point, and illustrated the management style. In Silicon Valley, a CEO would say: 'Distributing half of one percent to reward the creators of our products and provide incentive to keep them making us hundreds of millions of dollars? In a heartbeat!' While Atari said: 'Are you nuts? That's several million dollars! We're already paying them a salary'."

This disagreement led to the infamous meeting that the group had with Atari Inc's then-CEO Ray Kassar. Kaplan, Miller, Whitehead and Crane felt they should receive more recognition and be treated like the artists they were, but Kassar saw things differently, suggesting that they were no more important than other people in the production line. Crane and his companions didn't agree. Unbeknown to Kassar, the group already had plans in motion.

"At the time of our meeting with Ray Kassar we already had one foot out the door," admits Crane about that fateful meeting. "It was clear that we had skills that could translate into starting a company to at least develop games, if not also publish them. Either way it would have been more rewarding in every way than continuing to work for a company that didn't appreciate the people making the products. But while one foot was out of Atari, none of us were planning on leaving the videogame business."

» Activision games instantly stood out on shelves thanks to their distinctive box art.







» [Atari 2600] *Pitfall!* remains to be the standard bearer for Activision's early output.



» [Atari 2600] Most of Activision's arcade conversions ranged in quality.

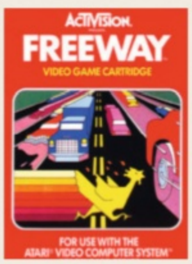


Crane, Kaplan, Miller and Whitehead didn't all leave immediately after that May meeting, with David revealing the following information about the split that would create a huge issue for Atari and caused legal action that would eventually take several years to settle. "It is a little-known fact that we all left Atari separately," David explains. "Larry was fed up with the mood in the lab and left to stay at home. I believe that Al left next, while Bob and I each finished up a project. But discussions continued during that transition, and when we found Jim Levy the process of creating Activision went into full swing."

Activision was launched in October and immediately faced stiff opposition from Atari. Realising that the four men had contributed massively to Atari's success (David revealed in an interview with GamaSutra that he and the rest of the Activision co-founders had contributed to 60 per cent of Atari's $100 million cartridge sales in a single year) Atari looked at suing the fledgling company in the aforementioned lawsuit, discrediting the team and accusing Activision of copyright and patent infringement. It didn't work and the complaint was eventually thrown out.

It wasn't just Atari that presented problems for the start-up company, with David admitting there were plenty of obstacles to overcome in those frantic first months of setting Activision up. "Activision was funded by venture capital – itself a young industry at the time," explains David. "VCs tended to want to invest in a physical product, not software. Before we met him, Jim Levy had been working with Sutter Hill Ventures for several months to fund a software venture, to some extent giving them an example of how intellectual property can be as valuable as a physical electronic product. By the time Jim partnered with four former Atari game designers responsible for eight-figure annual sales, Bill Draper and Sutter Hill Ventures were pretty well ready to sign up. After that it was all just technical. We had to reverse-engineer the Atari 2600, build development systems, buy a mainframe computer, build an EPROM programmer, etc. And, of course, Atari tried to sue us out of business. It was a busy time and we didn't get much sleep for the first couple of years."

» [Atari 2600] A selection of Activision's distinctive looking games, a trick learnt from Atari.





> **"It was a busy time and we didn't get much sleep for the first couple of years"**
> David Crane

The early pain was worth it however, and Activision ended up launching with four games: *Dragster*, *Fishing Derby*, *Checkers* and *Boxing*. It became immediately obvious that the group of men behind them had been paying careful attention while working at Atari – capitalising on the things that Atari did well, and improving on everything else. Like Atari, one of the first things that drew you to Activision's games was their distinctive artwork, with each game sporting a strip of different colours that immediately helped them stand out from the crowd.

More importantly for the four men who founded the company, their images were found within each manual, offering everything from hints and tips about their game to asking for feedback from the community. It was a great idea, instantly creating a connection between the gamer and the game's designer. Activision gave the impression that it cared, and playing games where you were persuaded to write to them about your own personal experiences with that game strengthened this bond.

And then there were the badges. As Activision evolved, it began offering badges as prizes to those who sent in their high scores and broke specific targets. Succeed and you'd receive a nice embroidered badge, often with a slogan like 'Save The Chicken Foundation' (*Freeway*) or the 'Explorer's Club' (*Pitfall!*) to proudly show off to your friends. We were keen to know which designer was behind the clever idea. "I have always attributed that to Jim Levy, although I don't remember being there for the 'Aha' moment," explains David.

BUSINESS AND PLEASURE

David talks making games while running a company

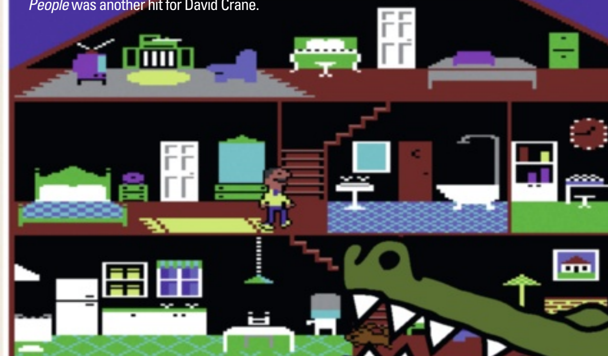


One of the most interesting aspects of Activision was that its co-founders were just as busy creating games as the rest of the staff at Activision. David himself worked like a trojan, being involved with ten Atari 2600 games while working there, as well as a number of prototypes. We were keen to know why he still insisted on creating games.

"I was born to make videogames," he proudly tells us. "I had a love for technology before I could walk, and then received training in art growing up. As a result I had both the left and right brain skills necessary to be creative with technology. I also have a knack for knowing what can make a game fun and I have published nearly 100 games using that skill.

"My Activision games were popular because game players found the same things fun that I did. Combine that with great marketing, sales and promotion and you see how those games made such a splash. What was it like? I was doing what I loved and making millions of people happy."

» [C64] Activision eventually moved to other home systems. *Little Computer People* was another hit for David Crane.





"They were the first 'Achievements' in the game business, and they were hugely successful. At one point the company had a room full of customer service representatives opening and fulfilling over 20,000 badge requests per week."

It wasn't just great customer service, beautiful box art and prizes that helped set Activision apart from Atari and its later peers. It also made genuinely good games. While it certainly wasn't infallible, an Activision game typically meant a sign of quality, and gamers would eagerly seek them out. There was a slickness to early Activision games that felt like you were finding undiscovered arcade games that had been somehow crammed into the Atari 2600 – ironically many of its later actual arcade ports weren't as good. Interestingly, the arcade nature of Activision's games came from the team's early connections with Atari, with David telling us: "We were constantly trying to improve our art, and in doing so we were always being pushed by our own earlier products. We weren't so much competing with others but with our prior body of work. In order to improve the state of the art, we put a lot of effort into the 'slickness', to use your term. The 2600 could display 127 different colors, but fewer than a dozen looked really nice so we limited ourselves to that small subset. We absolutely insisted on a 60 FPS frame rate, which makes a game smooth and crisp. Those are just a couple examples of design rules that we held our games to, and that made for the 'Activision look and feel'".

It wasn't all good news for Activision though, and like many others it was hit by the videogame crash. By the time of the great videogame crash, Larry Kaplan had already left Activision and had returned to Atari as a VP. Realising that it couldn't put all its stock in a single system, the company diversified and started shifting to other systems, including the PC, ColecoVision and Atari 8-bit computers. Despite moving across to more formats the company continued to struggle. Alan Miller and Bob Whitehead left together and formed Accolade, leaving David with Jim Levy.

Activision soon acquired the text adventure experts Infocom, but also used this opportunity to replace Jim Levy with Bruce Davis, who was quickly elevated to Activision's CEO. It wasn't to be a happy union and Infocom itself was shut down in 1989, three years after the original deal. "If Bruce Davis has any skill at all, it is self-promotion," reveals David about the period. "His only experience in the videogame business was to shepherd Imagic through bankruptcy and close it down. Yet he convinced the Activision board of directors that he could do a better job of running the company than Jim Levy, my choice of CEO. After he took over I gave Bruce the benefit of the doubt to see if he could fulfil that promise. When it was clear he couldn't, I left the company. Sadly, while it took him longer to accomplish, he managed to drive Activision from a $300 million company into one that could be bought for a few hundred thousand."

And that's exactly what happened. David left Activision and formed Absolute Entertainment with Activision employee Garry Kitchen in 1988. Activision changed its name to Mediagenic and shifted to selling business software, but it couldn't halt its crippling losses. Enter Robert Kotick who acquired Mediagenic, replaced Davis as CEO, moved Activision to Los Angeles and turned it into the media giant it is today.

We were keen to know how David felt about today's Activision compared to the one he first co-founded 35 years ago. "First, they are completely unrelated companies," he tells us. "Bobby Kotick bought a brand name, not a company. At one time, it was estimated that the trade name Activision was worth $50 million. Bobby bought the whole company and all of its assets – including the name – for about one per cent of what the name alone was worth. He then started a completely new company, taking only two to three existing employees along. Then he went on to build his new company into the largest videogame company in the world. Yes, having a 50 million dollar name was a plus, but he is to be commended on what he accomplished."

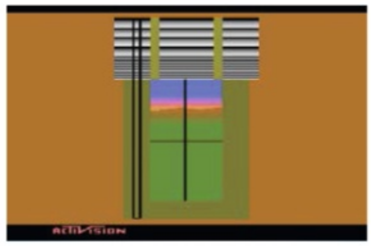
And it is an impressive accomplishment, with Activision now one of the most recognisable gaming brands in the world. Despite this David remains proud of what that original group of friends first achieved in 1979, liking it to the Wild West. "We fully realised that we were creating the third-party videogame industry," concludes David. "As I have said, we pioneered many, many 'firsts'. But the position held today by third-party game developers and publishers remains our primary legacy. When I speak to groups like the Game Developer's Conference, out of 600 people in the audience a show-of-hands of those working for console manufacturers might have fewer than 20 people raising their hands. The rest work for a third-party developer or publisher. If you work in the videogame business, you owe the very existence of the publisher who pays your salary to Activision. I think we accomplished our goals and then some."

PROTOTYPE TECHNIQUE

David Crane explains how Venetian Blinds came to be

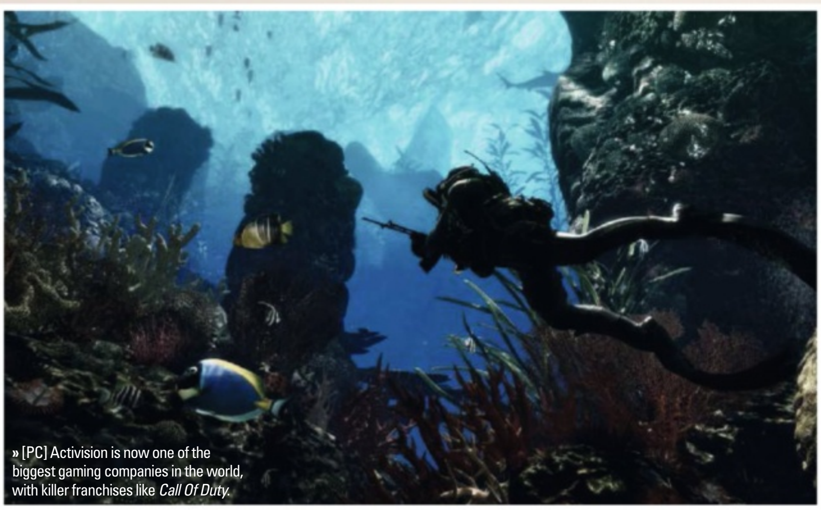
There are several Activision Atari 2600 games that exist as prototypes. *Bloody Human Freeway* is *Freeway*, with a man instead of a chicken, while *Thwocker* sees you collecting musical notes while avoiding numerous instruments. One of the most bizarre though is *Venetian Blinds*, which lets you open and close a set of Venetian blinds. David explains how it came to be. "Atari 2600 programmers all know about a technique we call the 'Venetian blind technique'," he begins. "It is a method that only displays every other horizontal line of a sprite, as if you are looking at the sprite through blinds. When Atari tried to sue Activision out of business, they specifically claimed the 'Venetian Blind Technique' as proprietary.

Ever the prankster, I developed a game cartridge that displayed a Venetian blind over a window that overlooked a grassy knoll at sunset. I thought it might be of some use in the lawsuit, since I figure the Atari lawyers wouldn't have a clue what the effect referred to. It ended up nothing more than something to show other programmers, including Atari's programmers, but it was actually the first appearance of the 'Activision Sunset', an attractive feature I liked to put in my side-view games. I understand that the code has shown up in some game compilations."





» Activision continues to dip into its back catalogue. It's recently started releasing games on iOS.



» [PC] Activision is now one of the biggest gaming companies in the world, with killer franchises like *Call Of Duty*.



ACTIVISION ATARI 2600 LEGACY

Activision made games for a number of consoles and home computers, but its genesis began with the Atari 2600. To celebrate its incoming 35th anniversary, we decided to look back at its Atari 2600 library







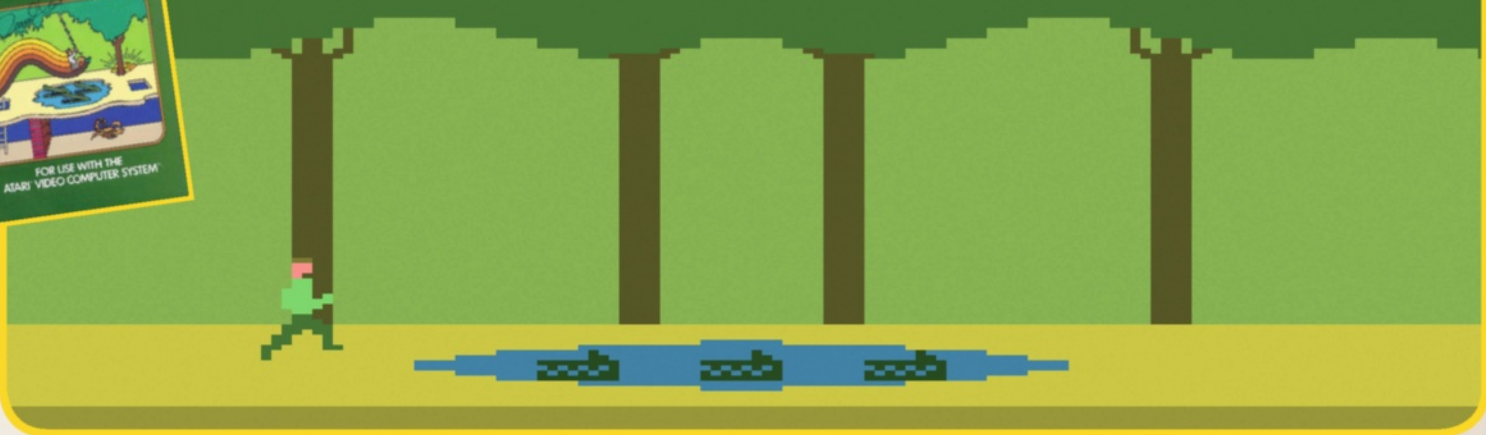
PITFALL!

YEAR: 1983 **PROGRAMMER:** DAVID CRANE

So this is it, this is the big one. *Pitfall!* may have been succeeded by its vastly superior sequel, but Pitfall Harry's first videogame outing remains an incredibly important game. *Pitfall!* has everything you'd expect from an early Activision game. It was technically superb, with David performing all sorts of graphical tricks and tweaks with the Atari 2600's hardware to ensure that the game ran as fast and smoothly as possible. The super-smooth scrolling was a remarkable feat in itself, predating the exploits of *Super Mario Bros* by a good three years. In addition to being technically impressive, *Pitfall!* also boasted excellent gameplay, and like virtually all Activision games, rewarded players with a lush embroidered badge if they achieved a certain score.

Play *Pitfall!* today and its charms remain readily apparent. Pitfall Harry may be a simple stickman, but he still manages to cut an impressive figure as he jumps across the heads of crocodiles and swings bravely across yawning chasms. Harry has 20 minutes to hoover up as many forgotten treasures as possible, but *Pitfall!*'s many traps and hazards mean this is no easy task and he'll soon run out of his precious lives. Even though *Pitfall!* was tough, it was never unfair thanks to super-tight controls and cleverly balanced level design. Leaping into a crocodile's jaws or slipping into quicksand was always your fault, not Harry's, so you'd simply restart and aim for a new high score. Even the high score system *Pitfall!* used was solid, as hitting hazards like logs would temporarily stun Harry and rob him of his precious points.

Stunning to look at and with fantastic gameplay to match, *Pitfall!* was a watershed game that not only cemented Activision's place within the videogame pantheon, but created a legacy that's still going strong today.

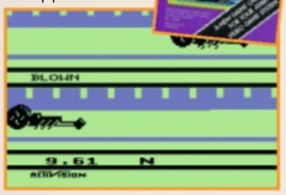


DRAGSTER

YEAR: 1980 **PROGRAMMER:** DAVID CRANE



A game of *Dragster* can be over in seconds, but what fantastically tense seconds they are. The aim of *Dragster* is simple – reach the finish line before your opponent does. It's easier said than done however, as if you over-rev your vehicle too much you'll blow your engine and be out of the race. Created by David Crane, it's an incredibly slick piece of programming that remains excellent fun when played against a friend.



CHOPPER COMMAND

YEAR: 1982 **PROGRAMMER:** BOB WHITEHEAD



Before he left to form Accolade, Bob Whitehead worked on a number of great Activision titles. This remains one of his best, being a great take on Eugene Jarvis's *Defender*. Planes and helicopters are bombarding a caravan of trucks and you must fly across the barren landscape taking down as many as possible. Filled with raucous sound effects and arcade-style visuals, it's an impressive piece of coding that showed just how ahead of the curve Activision was when it came to creating an arcade experience in your home.

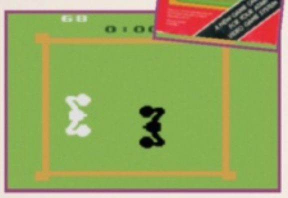


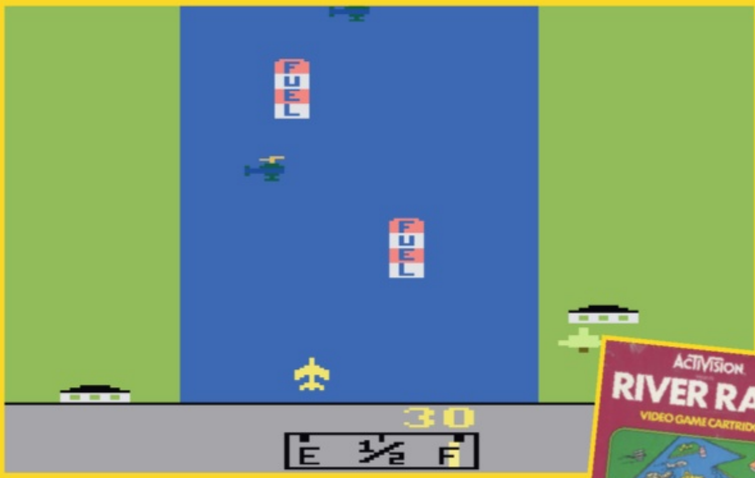
BOXING

YEAR: 1980 **PROGRAMMER:** BOB WHITEHEAD



Activision had a number of sports games in its catalogue, and *Boxing* was one of its best. Viewed from above, the aim of *Boxing* was simple – hit your opponent as often as possible. Whoever scores the most points at the end of two minutes wins. The controls were extremely straightforward, allowing you to throw left and right punches with the press of a button. Get your opponent on the ropes and you could pummel them into submission, netting ever more precious points. It's about as accurate to boxing as Hollywood is to British history, but it still manages to pack a terrific punch.







RIVER RAID

YEAR: 1982 **PROGRAMMER:** CAROL SHAW

Carol Shaw didn't make many videogames, but games like *Super Breakout* and *River Raid* aren't bad legacies to leave behind. *River Raid* in particular is an astonishingly good shooter that sees you flying up a never-ending river and shooting down as many ships, planes and enemy choppers as possible. It features a clever risk and reward system where you must decide between refuelling at tankers or shooting them for additional points. Technically stunning and sporting very impressive visuals, it remains one of Activision's best shooters and still plays exceptionally well.











KABOOM!

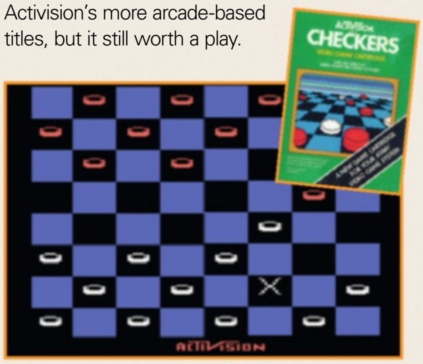
YEAR: 1981 **PROGRAMMER:** LARRY KAPLAN

Kaboom! is one of the few Activision games to be built around the Atari 2600's paddle controller. It's an immensely addictive game that sees you desperately trying to catch bombs that are thrown down at you. Fast paced and endlessly replayable, it's everything you'd expect from a killer Activision game.

CHECKERS

YEAR: 1980
PROGRAMMER: ALAN MILLER

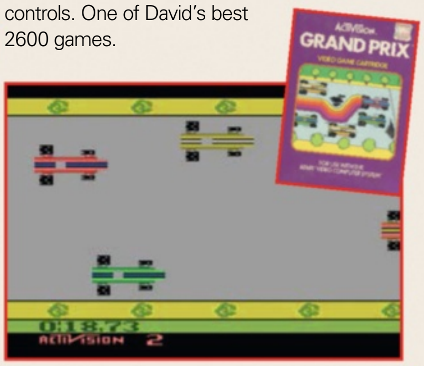
Checkers was one of the first four games that Activision released on the Atari 2600 and was an accurate reproduction of the popular game. It boasted three different difficulty levels, as well as the ability to play against a human opponent. It may have lacked the pizzazz of Activision's more arcade-based titles, but it still worth a play.



GRAND PRIX

YEAR: 1982
PROGRAMMER: DAVID CRANE

An excellent top-down racer from David Crane that has your race car weaving its way through increasingly tight traffic. Technically impressive (David explains all its graphical tricks in Issue 100), it features deadly hazards in the form of bridges and oil spills and boasts super-tight controls. One of David's best 2600 games.



THE ACTIVISION DECATHLON



YEAR: 1983 **PROGRAMMER:** DAVID CRANE

The running man that David Crane created for *Pitfall!* is certainly put through his paces in this joystick waggler. While the three available running events are absolute torture (particularly the joystick-hammering 1,500 metres) *The Activision Decathlon* remains a highly enjoyable game. The ten events control well, there's plenty of variety and it all runs along at a silky smooth pace. There's a large amount of customisation, while up to four players can compete against each other. There are a few too many chances for each player, which slows things down a little – and the events themselves are largely similar in their execution – but this is certainly worth returning to. Just don't be surprised if your precious joystick doesn't make it to the end of the game.

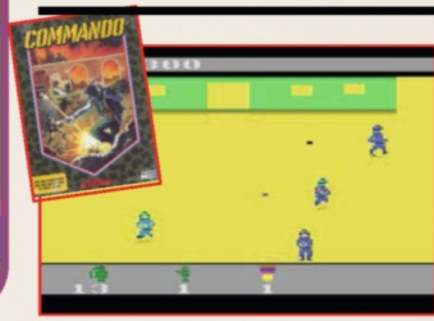


SEAQUEST

YEAR: 1983 **PROGRAMMER:** STEVE CARTWRIGHT

This brilliant blaster from Steve Cartwright is another wonderful title that features all the usual Activision polish and fantastic gameplay. Divers routinely swim across the screen and are chased by various denizens of the deep and you must rescue them as quickly as possible. Your sub has a limited amount of oxygen and when it runs out it explodes. Your sub will also explode if it comes into contact with enemy subs or sharks. Needless to say, your sub will explode… a lot. What makes *Seaquest* so enjoyable is the scoring mechanic that revolves around rescuing divers. You basically won't score any points until you have a full sub of divers, and every time you return to the surface to refill your oxygen you'll lose a diver. The end result is a fast and furious blaster where you'll be risking everything to get a full complement of divers as quickly as possible. Another Activision gem.







BARNSTORMING

YEAR: 1982 **PROGRAMMER:** STEVE CARTWRIGHT

You'll need great reactions and a keen eye if you want to get the best out of this fantastic game. Inspired after developer Steve Cartwright saw a biplane towing a flyer, he decided to create a fast-paced arcade style reaction test where you must guide your daredevil pilot through a set number of open barns. To make things trickier, pylons and birds routinely get in your way, requiring you to manage your speed as effectively as possible, and you can also hit the top of your barn – all moves that add unwanted seconds to your overall time. An essential release.



COMMANDO

YEAR: 1988 **PROGRAMMER:** MIKE REIDEL

While Activision was a whizz at creating home clones of hit arcade games, it didn't have quite as much success with its own home conversions. This effort from Mike Reidel does play the part but it's let down by poor collision detection, invisible walls and the fact that it's all too easy to get stuck on trees and bunkers. A good try, but ultimately disappointing.

ENDURO

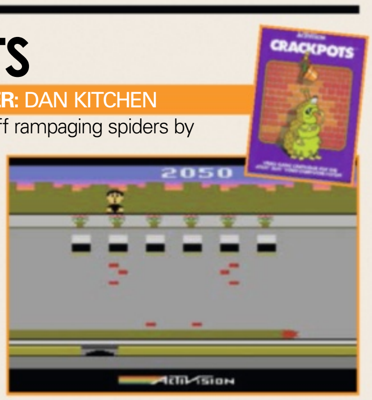
YEAR: 1983
PROGRAMMER: LARRY MILLER

Enduro is another homage/rip-off of an arcade classic, in this case Namco's *Pole Position*. It goes one better than Namco's title, however, by delivering numerous innovations including a day-to-night cycle, racing in snow and heavy fog. It's all wrapped up in Activision's typically impressive presentation.

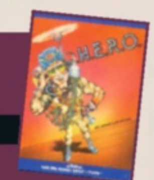
CRACKPOTS

YEAR: 1983 **PROGRAMMER:** DAN KITCHEN

Crackpots sees you fending off rampaging spiders by throwing flowerpots at them. It sounds a slight premise, and it is, but it's also stupidly addictive thanks to the sheer pace with which the spiders come at you. A nice touch is how the wall drops at the beginning of a round, leaving you even less time to fend off the incoming arachnids.



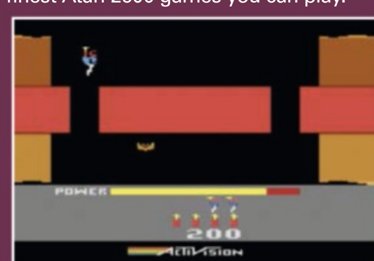
HERO



YEAR: 1984 **PROGRAMMER:** JOHN VAN RYZIN

One day, developer John Van Ryzin will reveal to us how he created one of the Atari 2600's finest hours. Until then we'll just have to remind you why *HERO* is so amazing. Ignored by many due to the great videogame crash, *HERO* has you flying around caves in an attempt to rescue trapped miners. Critters must be avoided or shot with your laser, walls can be destroyed with your sticks of dynamite, while your gyrocopter allows for extremely nimble manoeuvring. And it's all played against a tight time limit. Simply one of the finest Atari 2600 games you can play.





BEAMRIDER

YEAR: 1984 **PROGRAMMER:** DAVE ROLFE

Dave Rolfe only appears to have ever made one game for Activision. A pity, as it's an absolutely cracker. As with many early Activision games it's not only technically astounding, but has the all-important gameplay included as well. A simple shoot-'em-up at heart, *Beamrider* sees you shooting down waves of enemy UFOs as they come towards you. There's a three-dimensional slant to the gameplay, with enemies growing in size as they approach your fighter, and the whole thing plays with the slickness and pace of an arcade game. Highly impressive.







MEGAMANIA

YEAR: 1982
PROGRAMMER: STEVE CARTWRIGHT

Megamania is an excellent shoot-'em-up that takes the base mechanics of *Space Invaders* and supercharges them. The attack waves on offer are far more imaginative in their approach and collisions can be plentiful. Add in a constantly depleting energy bar and *Megamania* becomes truly essential.

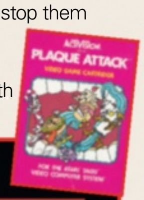




PLAQUE ATTACK

YEAR: 1983
PROGRAMMER: STEVE CARTWRIGHT

Plaque Attack is a truly different blaster, with a solid score system at its core. You must fight off waves of fast food using a tube of toothpaste and stop them from corroding the teeth of the mouth you're protecting. Once all the teeth are decayed it's game over. A silly game, with superb controls that's great fun to play.





STAMPEDE

YEAR: 1981 **PROGRAMMER:** BOB WHITEHEAD

Another extremely fun and challenging game from Bob Whitehead. *Stampede* saw you lassoing as many cattle as possible. Let three of them slip past you and the game was over, meaning you had to have extremely fast reflexes if you wanted to gather every steer. Like many Activision games, earning a high score allowed you to send off for a lovely badge.





AND THE REST…



FISHING DERBY
YEAR: 1980 **PROGRAMMER:** David Crane

FREEWAY
YEAR: 1981 **PROGRAMMER:** David Crane

GHOSTBUSTERS
YEAR: 1985 **PROGRAMMER:** Dan Kitchen

BRIDGE
YEAR: 1980 **PROGRAMMER:** Larry Kaplan

ICE HOCKEY
YEAR: 1981 **PROGRAMMER:** Alan Miller

OINK!
YEAR: 1983 **PROGRAMMER:** Mike Lorenzen

RAMPAGE
YEAR: 1988 **PROGRAMMER:** Bob Polaro

RIVER RAID II
YEAR: 1988 **PROGRAMMER:** David Lubar

ROBOT TANK
YEAR: 1983 **PROGRAMMER:** Alan Miller

SKIING
YEAR: 1980 **PROGRAMMER:** Bob Whitehead

KUNG-FU MASTER
YEAR: 1987 **PROGRAMMER:** Dan Kitchen

LASER BLAST
YEAR: 1981 **PROGRAMMER:** David Crane

SKY JINKS
YEAR: 1982 **PROGRAMMER:** Bob Whitehead

SPIDER FIGHTER
YEAR: 1982 **PROGRAMMER:** Larry Miller

TENNIS
YEAR: 1981 **PROGRAMMER:** Alan Miller



FROSTBITE

YEAR: 1983 **PROGRAMMER:** STEVE CARTWRIGHT

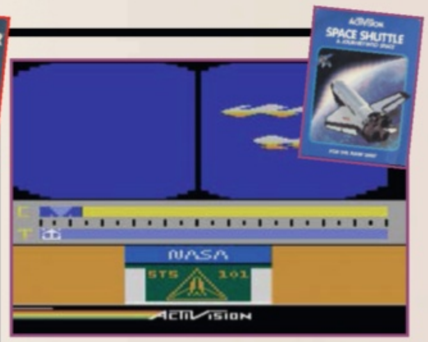
Frostbite is everything you'd expect from a high quality Activision title. It takes the core concept of a classic arcade game (in this case Konami's *Frogger*) but builds on it in spectacular fashion. Frostbite Bailey must hop along ice floes to build his igloo. Fish can be picked up for bonus points, while birds, crabs, polar bears and other creatures need to be avoided at all costs. Bailey also has to contend with a continually dropping temperature. Fast, frantic fun, *Frostbite* shows Activision at the top of its game.



STARMASTER

YEAR: 1982
PROGRAMMER: ALAN MILLER

Star Raiders made a big impact on the Atari 8-bit systems, so it was little surprise that Activision copied the formula with the excellent *Starmaster*. It's a typically polished effort, this time from Alan Miller, that sees you racing around the galaxy protecting bases and destroying enemy ships. It's worth playing it just to experience the exhilarating warp to new areas.



SPACE SHUTTLE

YEAR: 1983
PROGRAMMER: STEVE KITCHEN

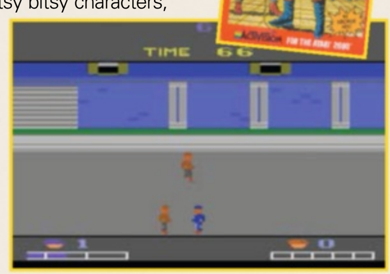
This ambitious effort was so complicated to play it used virtually every switch the Atari 2600 featured. Coming with plastic overlays, just launching your shuttle is an achievement in itself. It's not enough to simply get into orbit however, as you then need to dock before returning to Earth. A technically outstanding achievement that really pushed the host hardware to its limits.

DOUBLE DRAGON

YEAR: 1989 **PROGRAMMER:** DONALD HAN



You have to feel sorry for Donald Han, as the poor man was charged with creating a conversion of Technos's hit fighter for the Atari 2600. The end result is horrific with itsy bitsy characters, a convoluted control system due to the Atari 2600's single button and ridiculously unfair collision detection. The music is certainly impressive and the backgrounds are vaguely recognisable, but this is an otherwise terrible port.



COSMIC COMMUTER



YEAR: 1984
PROGRAMMER: JOHN VAN RYZIN

Although programmed before John Van Ryzin's *HERO*, *Cosmic Commuter* was actually released almost a year later. It's a thrilling mash-up, featuring the civilian rescuing elements of *Defender* with the landing of *Gravitar* and the fuel-managing of *River Raid*. The end result is a fast-paced blaster that delivers all the technical excellence you'd expect from an early Activision game with insanely addictive gameplay.



PRESSURE COOKER

YEAR: 1983 **PROGRAMMER:** GARRY KITCHEN

Like *Burger Time* you play a chef making hamburgers, but it's a lot trickier, with the player requiring a good memory and fast reactions to achieve the best results. There are no lives, but you are penalised for letting condiments smash and getting orders wrong. Needless to say it gets increasingly quicker on the higher difficulty levels, so you'll really need your wits about you.

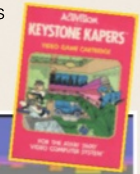


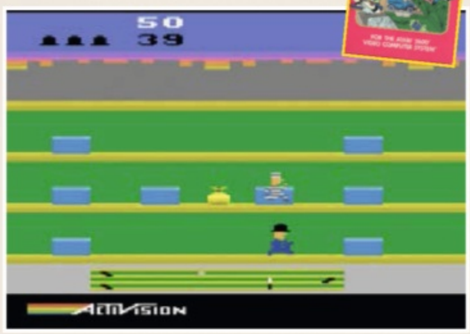


KEYSTONE KAPERS

YEAR: 1983 **PROGRAMMER:** GARRY KITCHEN

Another sterling arcade-style romp that proved how far ahead of the curve Activision was at the time. Taking on the role of a copper you must chase after and catch the aptly-named Harry Hooligan. Harry has other ideas though, and will do his best to keep one step ahead of you. Great visuals complement the fast-paced gameplay.





PRIVATE EYE

YEAR: 1984 **PROGRAMMER:** BOB WHITEHEAD

This is easily one of the most technically impressive games in Activision's library and a must-play. Taking on the role of a private eye you must travel around the many-screened map looking for items and taking them to various locations, all while dodging various hazards. It's a superbly crafted adventure with an impressive variety of missions.







PITFALL II: LOST CAVERNS

YEAR: 1984 **PROGRAMMER:** DAVID CRANE

David Crane's sequel was a massive improvement on the original game, offering plenty of new adventures for Pitfall Harry. In addition to being able to swim, the levels Harry explores are massive, with an obvious emphasis on exploring deep caverns. An excellent sequel and one of the most technically impressive Atari 2600 games you're ever likely to play.

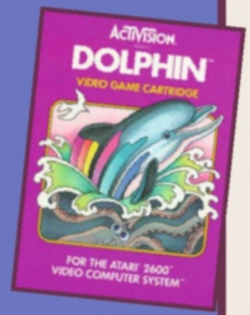


DOLPHIN

YEAR: 1983 **PROGRAMMER:** MATTHEW HUBBARD

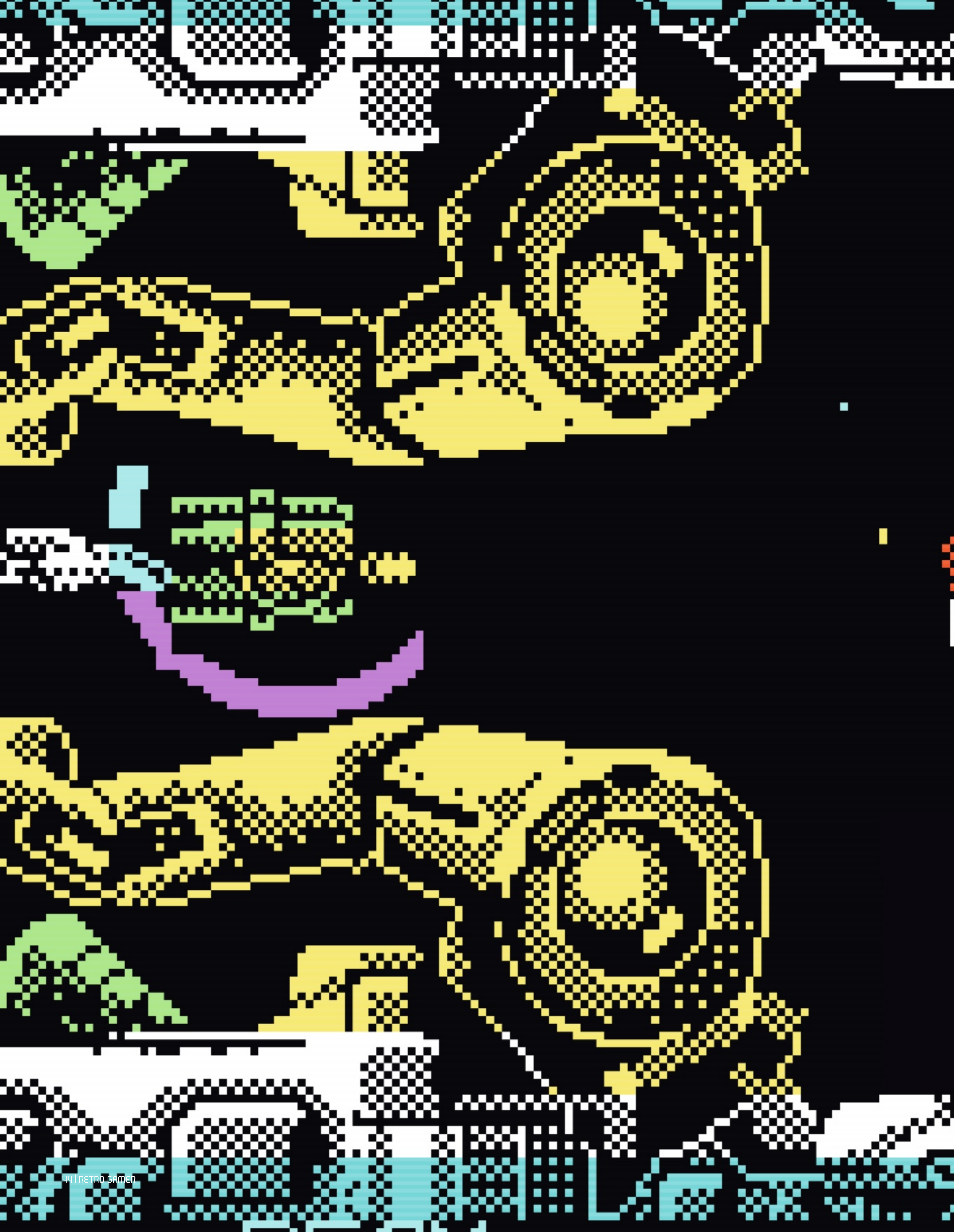
Before *Ecco* there was this entertaining release from Matthew Hubbard. You play a dolphin that's frantically outracing a giant squid. Walls of seahorses bar its way and you must use sonar to determine where the break in each incoming wall will be. A high pitch denotes that you'll need to rise to the top of the screen, while a lower pitch requires you to dive to the bottom. Red and green arrows represent fast and slow currents, while catching the seagull that randomly flies across the screen lets you attack the squid. A highly entertaining game that's exceptionally executed.







Special thanks to David Crane, Henry Clay and AtariAge for their help with this feature





RETROREVIVAL

R-Type

ASTONISHING SPECTRUM OWNERS SINCE 1988



» ZX Spectrum
» Software Studios
» 1988

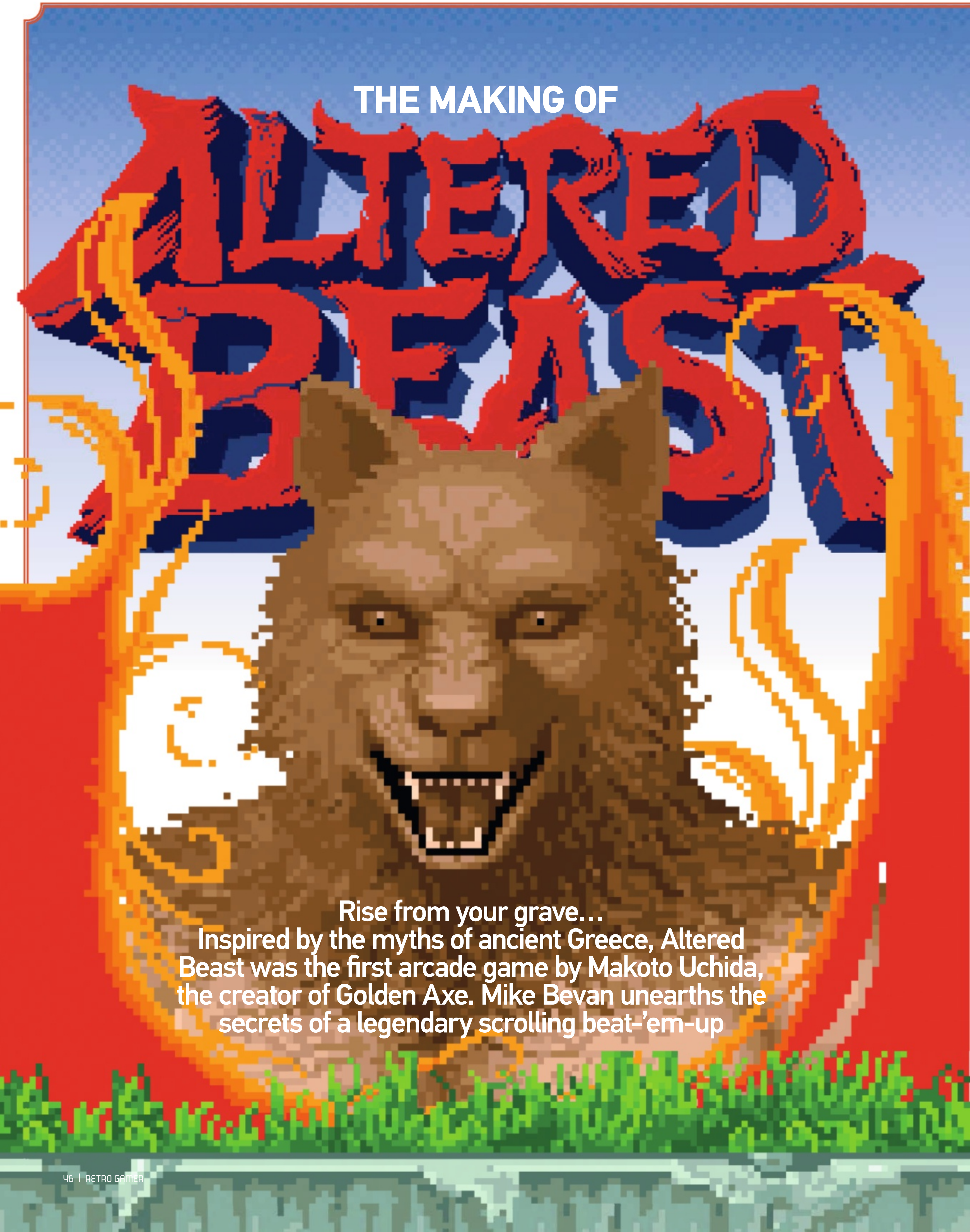
There are a great many superb arcade conversions available on the ZX Spectrum, but one of our favourites is this stunning port of Irem's hit shoot-'em-up that came out in 1988.

Programmer Bob Pape recently revealed the creation of his epic conversion in an online book called *It's Behind You: The Making Of A Computer Game*. It's a fascinating look, not only at the creation of Bob's epic conversion, but also of his time in the games industry and the many other games he worked on. It also explains why the original version of *R-Type* was missing the eighth and final level. In short it's an essential read and I recommend you head on over to Bob's site now at www.bizzley.com and download it.

Even with the hindsight of Bob's account of how he pulled off all the graphical trickery found in his conversion, *R-Type* remains an astonishing adaptation, accurately capturing all the major points of the game and marrying them to smooth scrolling and large, detailed sprites.

The multiload is a pain, but it remains an incredible achievement that captures all the thrills and spills of the original arcade game. Huge bosses including the mothership on the third level, excellent hit detection and accurate use of the Force power-up makes *R-Type* an amazing Spectrum blaster that deserves to be in everyone's collection. *R-Type* was apparently quite rare where Bob lived, but I have fond memories of playing it in the Poole arcades before nipping around to my friend's house and continuing the fight against the Bydo enemy there. Thanks Bob, you're the best. *





THE MAKING OF

ALTERED BEAST

Rise from your grave…
Inspired by the myths of ancient Greece, Altered Beast was the first arcade game by Makoto Uchida, the creator of Golden Axe. Mike Bevan unearths the secrets of a legendary scrolling beat-'em-up



» [Arcade] These white two-headed dogs release Spirit Ball power-ups when walloped.



» [Arcade] This boss loses his head, repeatedly chucking it at you. Dodge and return fire..

A*ltered Beast*, or *Juu-Ohki* [Beast King's Chronicle] to give it its original Japanese title, is a game that somewhat polarises opinion. As a pack-in title for Sega's Mega Drive it was often derided as a throwaway arcade conversion lacking the depth of *Sonic The Hedgehog*, the game that would replace it in later console bundles. Weak conversions for other platforms like the Famicom and Master System also damaged the game's credibility. But on its release in 1988, the arcade version was an impressive diversion – an entertaining mash-up of *Kung-Fu Master* and *Manimal*, featuring two shape-shifting heroes and an eye-catching bestiary of enemy creatures and grotesque end-of-level bosses.

With its faux ancient Greek setting, in which Zeus revives a pair of dead warriors to battle underworld ruler Neff and rescue his daughter Athena, *Altered Beast* saw players transforming into wolves, bears, dragons and tigers; a different creature for each level of play. Power-ups called Spirit Balls appeared after dispatching white Cerberus-like two-headed dogs, and collecting three in a row led to a memorable mighty-morphing cut-scene and the acquisition of unique new abilities. And handily, the game allowed you to fully power up your warrior into a death-flinging animorphic entity before unleashing its gargantuan end-of-level bosses on you.

"I wanted to surprise everyone by creating an action game with flashy visuals that no one had ever seen, with specific emphasis on the characters and the environment," states lead designer Makoto Uchida, who admits to being inspired by *The Howling* and Michael Jackson's groundbreaking video for *Thriller*. "I thought such things could easily be expressed in the game world through CG. I made the appearance of the boss characters as impressive as I could, but the most successful presentation was the transformation sequence [starting with that of the Wolf]. It was finally achieved by asking the game's lead artist to focus just on this for an entire month…"

The game was created on Sega's System 16 arcade hardware, dubbed by the team "the board that could display very large pictures", useful for a title with such unusually large and detailed character sprites and enemies. Starting out in the graveyard in which your hero is reincarnated and descending into the Neff's underworld realm, the game packs in an array of adversaries from zombies, demons and gargoyles to rattlesnakes, unicorns and giant ants. Arch-villain Neff has his own set of peculiar transformations, taking the role of all five bosses in the game, including a many-headed monstrosity, a giant bug-eyed plant and a rampaging rhino. The game also marks the first appearance of the Cockatrice, or 'chicken-leg monster', which would re-appear in a friendlier role as a rideable steed in *Golden Axe*. "There are five completely different worlds in *Altered Beast*," says Uchida. "I chose beasts that would best match the ▶



IN THE KNOW

- » **PUBLISHER:** SEGA
- » **DEVELOPER:** SEGA
- » **RELEASED:** 1988
- » **PLATFORM:** ARCADE
- » **GENRE:** SCROLLING BEAT-'EM-UP

FANTASTIC CREATURES The transformations of Altered Beast



WOLF
■ Throws fireballs and can execute a flaming dash attack.



DRAGON
■ Shoots lightning bolts and can electrocute enemies.



BEAR
■ Breath petrifies enemies and can do a jumping roll attack.



TIGER
■ Shoots fireballs and can execute a vertical dash attack.



GOLDEN WOLF
■ Similar to the standard wolf but a bit more powerful.



» [Arcade] This plant boss literally eye-balls you…



» [Arcade] This alligator-thingy spouts baby dragons at your tiger.



environment that could reign as the most powerful existence in that world."

The System 16 board was also powerful enough to supply the game's signature visual effect, where punching the bad guys led to exploding limbs flying out of the screen in exaggerated mock 3D, although Uchida reveals that the beat-'em-up-style gameplay was originally going to be even more visceral. "We planned to use a button that had a sensor to detect the strength of the pressure for *Altered Beast* at the beginning," he reveals. "However, the development of the button didn't go well internally. We consulted with the company who owned the patent of pressure-sensitive devices but they couldn't make one as the order numbers were small and so this idea was killed. I envy today's developers as the pressure-sensitive devices are used for most of the consumer videogames now."

Uchida also admits that the game's development proved challenging in other ways. "*Altered Beast* was my first game development experience," he says. "I didn't know how to create the fun in the gameplay and struggled a lot. I managed to build the gameplay balance – the most important part of the game – with the advice from an experienced lead programmer." However there was time for a little high-jinx as the team managed to include a couple of Easter Eggs relating to previous System 16 games: *Alex Kidd: The Lost Stars* (look out for a couple of gravestones near the start of the game) and *Shinobi*. "The reference to *Alex Kidd* was included as the lead programmer had worked on the game," says Uchida. "As the other team members had also worked on *Shinobi*, we felt that there should be some reference to that game also… please look out for them."

Beating *Final Fight* to the arcades by almost a year, initial play-testing in Japan saw *Altered Beast* proving quite a spectacle, as its designer remembers proudly. "The best thing [about making the game] was that I could show my idea to everyone and surprise them," continues Uchida about the proud moment. "I was so thrilled when I saw, not only the players, but the people around the players uniformly surprised at the video arcade." One thing Uchida doesn't shy away from though is admitting that as a credit-pumping arcade title it was fine but overall *Altered Beast* was lacking in depth. "Because of the [lack] of a pressure-sensitive sensor button, the number of character actions fell to half from the original concept and the complexity of the game was decreased by this," he comments. "As a result, players got tired of the game relatively soon."

Despite this, the game proved even more popular overseas than in its country of origin, leading to it being chosen by Sega as a launch pack-in game for the Sega Mega Drive/Genesis bundle in Europe and North America. It remains a well-remembered title due to the fact that nearly every Mega

"I was really surprised with the high popularity in the Western market"
Makoto Uchida



DEVELOPER HIGHLIGHTS

GOLDEN AXE
(PICTURED)
SYSTEM: ARCADE
YEAR: 1989

ALIEN STORM
SYSTEM: ARCADE
YEAR: 1991

GOLDEN AXE: THE REVENGE OF DEATH ADDER
SYSTEM: ARCADE
YEAR: 1992

» [Arcade] Kicking a chicken-leg monster in the beak.



ALTERNATIVE BEASTS

How the home versions stacked up…

MEGA DRIVE

■ The Mega Drive conversion is the most well-known, as well as the closest to the arcade original, although some of the more advanced graphical niceities like the pseudo-3D exploding body parts are missing. It has to be said that only giving players one life to complete the game is probably a little bit mean, unless you can find the hidden Options screen…



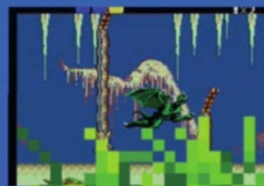
PC ENGINE

■ The PC Engine version is pretty good, despite its rather bland redrawn backgrounds and a steeper difficulty curve. The gameplay is well replicated, although the lack of buttons on the PC Engine pad necessitates using Up to jump. There was also a CD version which added little more than a dull five-minute intro and isn't really worth bothering with.



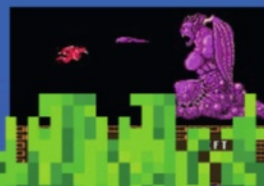
MASTER SYSTEM

■ This port suffers a little from choppy graphics, although the 'shattering' effect when dispatching enemies is quite nice. There's an odd transition to a black background when fighting bosses, as if the system couldn't cope with displaying both at the same time, and the third level from the arcade game – including the bear transformation – is missing entirely.



FAMICOM

■ This conversion never made it to the Western NES format and it's not hard to see why. The character graphics are tiny compared to the original, looking like they belong more in something like *Ghosts 'N Goblins* than *Altered Beast*. However, developer Asmik added a number of new levels and beast transformations including a lion, shark and phoenix.



COMMODORE 64

■ Sadly the best thing about Activision's Commodore 64 version is Martin Walker's rendition of the in-game music on the title screen. The actual game is so slow and jerky that it's hard to gain any enjoyment from it, the graphics are horribly blocky and indistinct and there never appears to be many more than two enemies on-screen at once. Not good at all.





» [Arcade] Neff's final boss form is one angry rhino…

Drive owner in the West probably played the conversion at some point. "As *Altered Beast* was not so popular in Japan I was really surprised with the high popularity in the Western market," admits Uchida. "I'm really proud that people still remember and play my game. I was told by my boss 'you are already a legend!' the other day, but I think of myself as still [relatively not well-known] in this industry."

We were keen to know if Uchida had been involved with the Mega Drive and Master System conversions as well. "I didn't belong to the conversion team so I only gave some advice," he replies. "However, as the Mega Drive was based on System 16 (the arcade board used for *Altered Beast* and *Golden Axe*), the game was well reproduced and I didn't have any worry for the Mega Drive conversion. I had hoped to bring back the actions dropped because of the button trouble, but gave up again as the Mega Drive also didn't have pressure-sensitive device and the development schedule was tight."

"When I heard that *Altered Beast* would be bundled with all the Sega Genesis packages in North America I had no idea what to expect," Uchida recalls. "I was working in Japan and heard about it there. I just said 'that's terrific, I can't wait to see it'. But we never saw the bundle in Japan. I had to go to the US about three years later and I heard about it again. So I said 'this time I'll definitely go to a store'. But I couldn't find it anywhere. There was nothing but the *Sonic The Hedgehog* bundle available! So I was never able to see it. That's my only regret about the game…"

Along with the Mega Drive conversion, *Altered Beast* became a much-ported Sega arcade title – although with varying results – with Activision taking on the European conversions for the Amiga, C64, Spectrum and other home computer formats. Uchida continued to work on Sega coin-op releases, following *Altered Beast* with *Golden Axe*, *Alien Storm* and *Die Hard Arcade*, among others. Although *Altered Beast* never received an arcade sequel, it did spawn a couple of later spin-offs – *Altered Beast: Guardian Of The Realms* on Game Boy Advance in 2002, and *Project: Altered Beast* on PlayStation 2 in 2005, which Uchida also advised on. *Guardians Of The Realms* revived the traditional side-scrolling beat-'em-up mechanic with rendered graphics and additional animal forms to transform into, including a snake, shark, scorpion and eagle.

Project: Altered Beast was a radical overhaul closer in feel to *Devil May Cry* or *Resident Evil*, with a much darker tone and ramped-up gore and violence that set it apart from the original arcade game. "We really couldn't steer away from the violence aspect," comments Uchida. "The American marketing side was cheering us on, so we did it as best we could. In the old version, you could only transform into a predetermined beast, but this time [we had] a werewolf, merman, wendigo (ice giant), galuda (bird man) and a dragon." Receiving mixed reviews, mainly criticising its ungainly 3D camera and murky graphics, the game was only released in Japan and Europe. On a more positive note, Neff, in his ultimate Rhino boss form, recently made an appearance in the videogame baddies' rehabilitation meeting in the Disney movie *Wreck-It Ralph*, alongside Clyde, Bowser and Dr Robotnik.

Uchida now manages Sega's Shanghai studio, which most recently worked on the Xbox 360 Live Arcade version of *Nights Into Dreams*. However, he is still amazed by the sustained popularity that surrounds his old-school arcade titles. "When I occasionally visit videogame arcades in the US, I still see people playing my *Altered Beast* and *Golden Axe* games," he comments. "It proves to me that, if the game is good, people will still pay good money to play it. And it makes me really happy."



» As was often the case, the Japanese Mega Drive case looked far cooler.



» [GBA] *Altered Beast: Guardians Of The Realms* updated the graphics but the scrolling action remained very similar to the first game.

AMSTRAD CPC

■ While it manages to have a few more enemies on-screen than the C64 version, as well as attempting to replicate some of the more subtle graphical effects, the Amstrad port is also horribly slow to the point of being almost unplayable. However there is at least a decent version of the in-game tune, although it's not up to par with the Spectrum conversion.



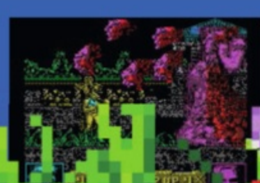
AMIGA

■ Unlike Virgin's impressive Amiga port of *Golden Axe*, Activision's conversion of *Altered Beast* seems to be modelled on the Atari ST version, and unfortunately both ports are incredibly sluggish to play with dodgy hit detection. It's a shame as it certainly looks the part, although like the Famicom version a large portion of the screen is taken up by a status bar.



ATARI ST

■ The Atari ST conversion of *Altered Beast* is pretty disappointing. It certainly looks nice with very impressive visuals, but it's extremely slow to play, lacking the pace of the original arcade game. It also loses much of the screen to a huge status bar that makes the playing area feel constricted. Not terrible by any means, but disappointing all the same.





THE WONDER BOYS

A WESTONE RETROSPECTIVE

Established by former Tehkan employees, Westone Bit Entertainment is mostly known for its Wonder Boy/Monster World series. However, it also crafted a variety of titles with a distinct visual style and consistently excellent gameplay

At its beginning, Westone consisted of only three staff members, all working in the custodian's room of Tehkan. After the success of its *Wonder Boy* series of games, it later expanded throughout the Nineties. At its height in 1998, the company had two offices at its disposal and had employed about 35 staff members altogether.

The company was originally formed under the name Escape, and consisted of three people: Ryuichi Nishizawa and Michishito Ishizuka, the two founders – who also acted as programmers – as well as Hiromi Suzuko, a graphic artist. Nishizawa reveals that he got his foot in the industry from hanging out in the arcades. "When I was 17 years old, Mr Ishizuka and I were playing at an arcade run by Tehkan, which is the company where he worked. He asked me, 'if you like playing games so much, would you like to try working part-time at our company?' We both learned how to develop games when working part-time at Tehkan."

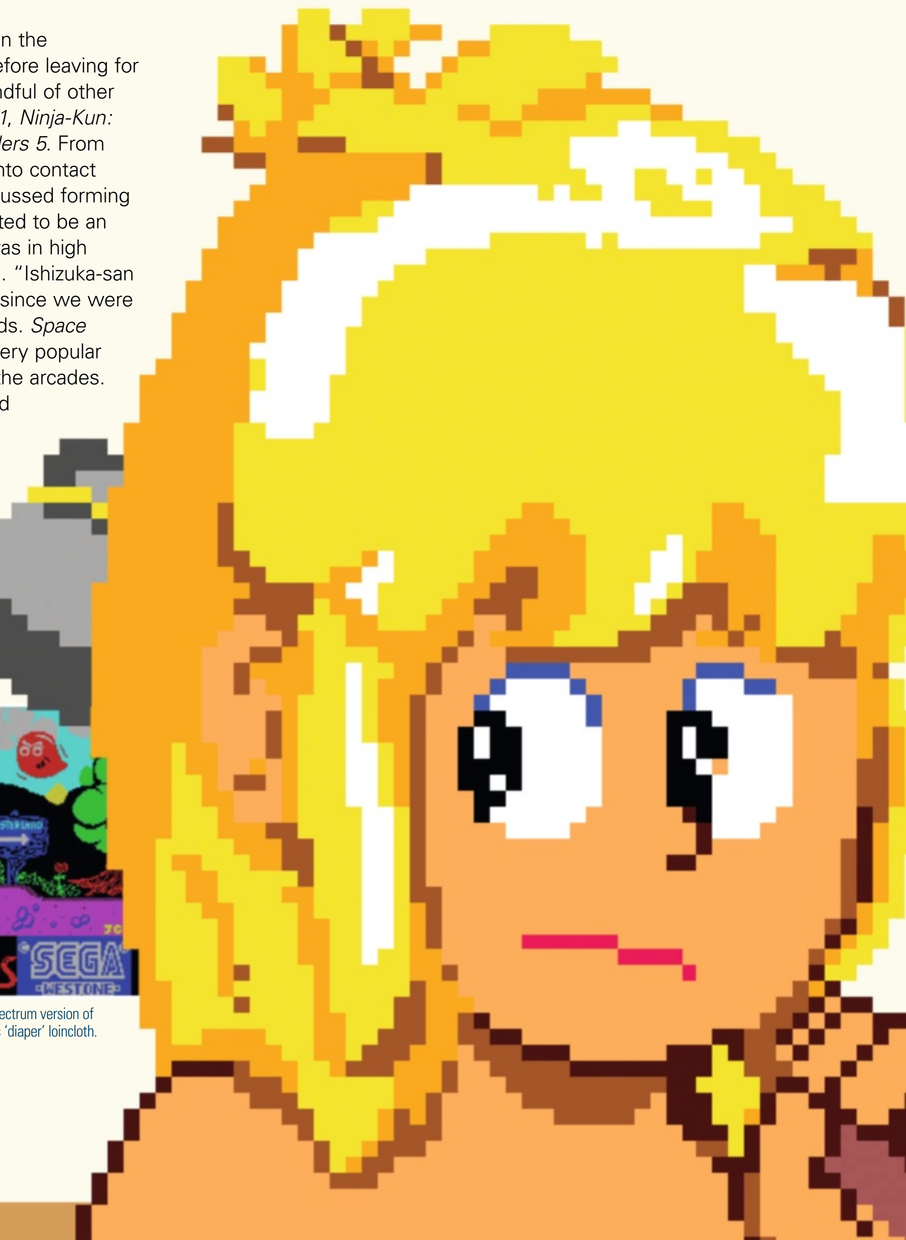
Nishizawa helped work on the soundtrack for *Swimmer* before leaving for UPL. Here he worked a handful of other games, including *Nova 2001*, *Ninja-Kun: Majou No Bouken* and *Raiders 5*. From there, Nishizawa got back into contact with Ishizuka, and they discussed forming their own company. "I wanted to be an entrepreneur ever since I was in high school," explains Nishizawa. "Ishizuka-san and I had been classmates since we were 14 and we were good friends. *Space Invader*-type games were very popular and every day we went to the arcades. We promised that we would work on games together in our own company. I thought if I made three games at UPL, I would obtain enough knowledge to develop on my own. So he and I followed up on that promise to work together."



» [Arcade] *Ninja-Kun: Majou No Bouken* was released in 1984 by UPL, and was one of the first titles worked on by Nishizawa.



» [ZX Spectrum] The title screen of the ZX Spectrum version of *Monster Land* features the hero in his famous 'diaper' loincloth.



IN THE KNOW

- Westone was initially known as Escape – after the button found on a keyboard – but was afraid it suggested unreliability, so the company changed it to Westone.
- The company name is pronounced "West-stone", rather than "West-one". It is a portmanteau of the English translations of the first kanji in each of the founders' last names (nishi = west, ishi = stone).
- The initial title of *Wonder Boy* was 'Wonder Bocke', named after the eponymous hero, but was changed at the request of Sega.
- Sega published Westone's arcade games and many console titles, but Hudson Soft also ported Westone's various works to the PC Engine, often with inexplicable changes.
- *Wonder Boy* was featured in Fleetway's *Sonic The Comic* series starring Shion, the hero of the first Mega Drive game.
- Westone developed the North American exclusive Sega CD port of *Dungeon Explorer*, which was completely different from its PC Engine and Super Famicom counterparts.
- Westone also developed *Appare! Gateball* for release on the PC Engine, one of the very few videogame croquet simulators.


» [Arcade] *Wonder Boy In Monster Land* melded RPG elements with arcade-style action platforming.


» [NES] *Wonder Boy* ended up on Nintendo platforms renamed as *Adventure Island*, starring Hudson mascot Takahashi Meijin.

Since the company was just beginning, in order to save costs the trio rented the custodian's room in Tehkan's office building. They were allowed to stay for free, as long as they helped with the maintenance. Their days were spent programming; their nights were spent performing janitorial duties.

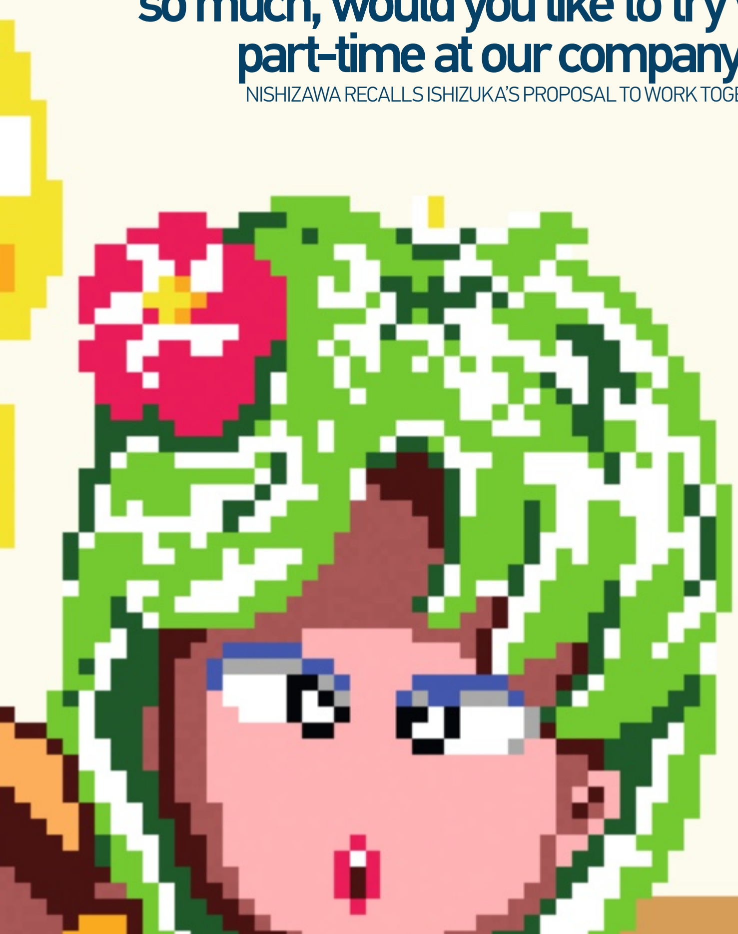
Still, the space was adequate for their duties and the accommodations were decent for such a small space. "There was also a kitchen and a bathroom. I slept there, but Ishizuka-san and Suzuko-san slept at their homes." Westone's first game was *Wonder Boy*, a side-scrolling platformer similar to *Super Mario Bros* starring a young prehistoric boy named Bocke (renamed Tom-Tom in worldwide releases). In addition to the usual bad guys and bottomless pits, there is also a meter that counts down quickly, which can only be replenished by grabbing fruit power-ups. "I wanted to make an action game with the feeling of pressure," explains Nishizawa. "Therefore I made a horizontal-scrolling platformer where the player could not stop moving. It was too difficult, and I was unable to play it, so I regretfully had to change it. That became *Wonder Boy*. The skateboarding item is a remnant of the initial plan."

Wonder Boy was published by Sega, and performed quite well. "*Wonder Boy* was commercially successful, so with that money we moved to a larger office," continues Nishizawa. Escape had a unique contract, however. While Sega published *Wonder Boy*, the company still held onto the rights of the game itself. They sold the game to Hudson, who then ported the game to the Famicom. In the process, they replaced Bocke with a cutesy version of Toshiyuki Takahashi (more casually known as Takahashi Meijin), the company spokesperson. This partnership with Hudson continued throughout the decade.

It was long believed that Sega owned the rights to the *Wonder Boy* name, which is why Hudson changed the names and



> **"He asked me, 'if you like playing games so much, would you like to try working part-time at our company?'"**
> NISHIZAWA RECALLS ISHIZUKA'S PROPOSAL TO WORK TOGETHER.



THE MANY FACES OF WONDER BOY IN MONSTER LAND

The sprites of *Wonder Boy In Monster Land* have been altered through many ports by many developers. For the PC Engine port, the cast has changed into characters from the Bikkuriman sticker collection series. The Famicom version, published by Jaleco, was renamed *Saiyuuki World*, takes place in Ancient China, and stars Son Goku the legendary Monkey King. The Brazilian Sega Master System version stars the characters of Mauricio de Sousa's *Monica's Gang* comic and cartoon series. And the mobile phone port once again stars chubby Takahashi Meijin, of the *Adventure Island* games.


SAIYUUKI BIKKURIMAN MONICA



» [TurboGrafx] *Wonder Boy III: The Dragon's Trap* was ported to the TurboGrafx-16 under the name *Dragon's Curse* in the US, and *Adventure Island* in Japan.

TIMELINE

1986 THE THREE FOUNDERS LEAVE TEKHAN TO FORM ESCAPE, AND A DEAL IS FORMED WITH SEGA TO PUBLISH ITS FIRST TITLE, WONDER BOY.

1987 ESCAPE CHANGES ITS NAME TO WESTONE, MOVES OFFICES, HIRES ADDITIONAL STAFF AND DEVELOPS WONDER BOY IN MONSTER LAND.

1988 WONDER BOY III: MONSTER LAIR IS RELEASED.

1989 WONDER BOY III: THE DRAGON'S TRAP IS RELEASED, BUT ONLY IN EUROPE AND NORTH AMERICA.

1991 POWER ELEVEN AND WONDER BOY IN MONSTER WORLD (MONSTER WORLD III) IS RELEASED.

1994 BLOOD GEAR FOR THE PC ENGINE AND MONSTER WORLD IV FOR THE MEGA DRIVE ARE RELEASED.

1995 DUNGEON EXPLORER FOR THE SEGA CD IS RELEASED. THIS IS THE LAST WESTONE TITLE RELEASED IN NORTH AMERICA FOR SEVERAL YEARS.

1997 WILLY WOMBAT FOR THE SATURN IS RELEASED.

1999 MILAN NO ARUBAITO COLLECTION FOR THE PLAYSTATION IS RELEASED.

2002 NEON GENESIS EVANGELION: AYANAMI RAISING PROJECT, THE FIRST OF FOUR PRODUCTS BASED ON EVANGELION, IS RELEASED FOR THE DREAMCAST.

2005 PRINCESS MAKER 4, THE LATEST ENTRY IN THE LONG-RUNNING SERIES, IS RELEASED FOR THE PLAYSTATION 2.

2007 MONSTER WORLD COMPLETE COLLECTION FOR THE PLAYSTATION 2 IS RELEASED.

2012 SEGA VINTAGE COLLECTION: MONSTER WORLD FOR THE PSN, XBLA AND WII VC IS RELEASED.

"I want to make an action game with the feeling of pressure"

NISHIZAWA DESCRIBES THE TIME LIMIT IN WONDER BOY



graphics to avoid interference. However, according to Nishizawa, this is not true – Hudson made alterations for reasons unknown. "'Wonder Boy' is only a trademark that Sega owns. My company owns all of the copyrights. Therefore, there is no problem in letting the Wonder Boy character appear in any game that Hudson releases. However, Hudson almost always changed the character… Why was that? I once politely asked the staff at Hudson, but they would not tell me."

Escape continued to expand, hiring more developers, including Rie Yatomi, the wife of Michishito, as well as Shinichi Sakamoto. Both had previously worked for Tehkan, as a graphic designer and a composer, respectively. In order to gain capital for its next big title, Escape accepted contract work to develop a title based on the movie *Jaws: The Revenge*. The game was published only in North America by LJN, and while it's a unique title, it also has a reputation for being substandard.

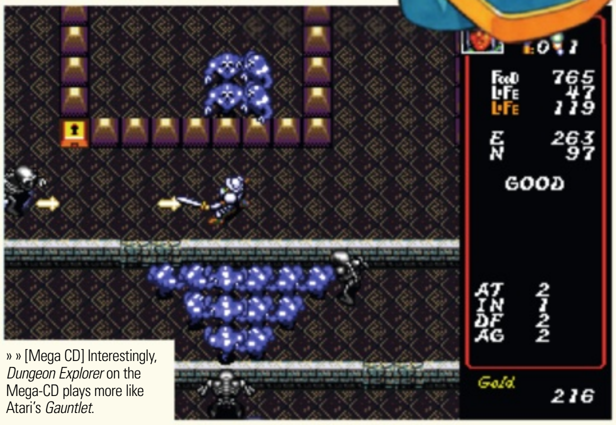
The reason for its quality and brevity can be easily explained – it was developed over the period of two months. "*Jaws: The Revenge* for NES was developed by myself, Mr Sakamoto and Mr Ishizuka. I drew all of the graphics. After the release of *Wonder Boy* but before starting *Monster Land*, we developed it at the request of Atlus. We created it in about two months. Upon watching the videos on YouTube, it's quite slipshod isn't it?"

Westone's next big title was *Wonder Boy In Monster Land*, which recast the prehistoric hero of the original game as a sword-wielding warrior. Rather than just straightforward platforming, there are also towns to visit, equipment to purchase and NPCs to talk to. Nishizawa explicitly traces this influence to his fascination with computer RPGs. "It's because I got absorbed in *Wizardry*. After *Wonder Boy* was released we played it every day while avoiding work. Therefore, I wanted to combine RPG elements with an action game."

Westone followed up *Monster Land* by returning to its action-platformer roots with *Wonder Boy III: Monster Lair*. The team had wanted to implement two-player simultaneous play in the original *Wonder Boy*, but ran into one substantial issue – how do you keep two players on the screen at the same time so one doesn't scroll the screen while leaving behind the other? *Monster Lair* attempted to solve that problem by auto-scrolling the screen, so both players advance at the same pace.

After this, Nishizawa and his team went back to world of *Monster Land* to create a direct sequel, this time one aimed especially at the home audience. This fourth *Wonder Boy* game became known as *Wonder Boy III: The Dragon's Trap* in North America (the numeral was dropped for the European release), and *Monster World II* in Japan. It's about here where the series numbering becomes confusing to English speakers, which Nishizawa apologises for, since these localisation decisions were made by Sega and not by his company.

The Dragon's Trap was developed for the Master System, but was only released for the platform in North America and Europe. Its Japanese release was cancelled due to Sega abandoning the system in that territory, but was eventually released in modified forms for the PC Engine and Game Gear.



» [Mega CD] Interestingly, *Dungeon Explorer* on the Mega-CD plays more like Atari's *Gauntlet*.



» [Mega Drive] Few Mega Drive titles look as gorgeous as *Monster World IV*.

After four iterations of the *Wonder Boy/Monster World* series, Nishizawa took a different direction with the arcade game *Aurail*, a mecha action title featuring a walking tank called a Transom. There are two gameplay perspectives: traditional overhead 2D run-and-gun scenes, similar to *Iron Tank* and *Mercs*, and 3D first-person action scenes, where you walk through tunnels and fight robots.

"I used to love shooting games. Myself, I had made many comical action games, so I wanted to create a game that fully utilised the skills of the rest of the development staff," says Nishizawa. "So, I was able to develop *Aurail* because I had a team who excelled at mechanical designs. Masanori Yoshihara, who drew the character illustrations for *Monster World II*, was in charge of the mechanical designs. Additionally, Maki Ohzora was in charge of the background designs. She had just joined the company, and her first work was background design for *Aurail*. Also, I designed the player's robot and the enemies in the 3D scenes using a 3D modelling tool."

Aurail was originally conceptualised as a fully 3D game. "Sega's System 16B had the ability to scale sprites, which could be used to build pseudo-3D visuals. At the time, there wasn't any way to generate polygons. So, I worked very hard on those stages. However, I wasn't able to create enough of them, so the 2D stages were included to flesh it out."

The next title in the *Wonder Boy* series, *Wonder Boy In Monster World* for the Genesis, was primarily overseen by Michishito Ishizuka. While it's a non-linear action-RPG similar to *The Dragon's Trap*, it's missing the assorted animal transformation. Nevertheless, the game features a number of throwbacks and references to all of the previous games in the series.

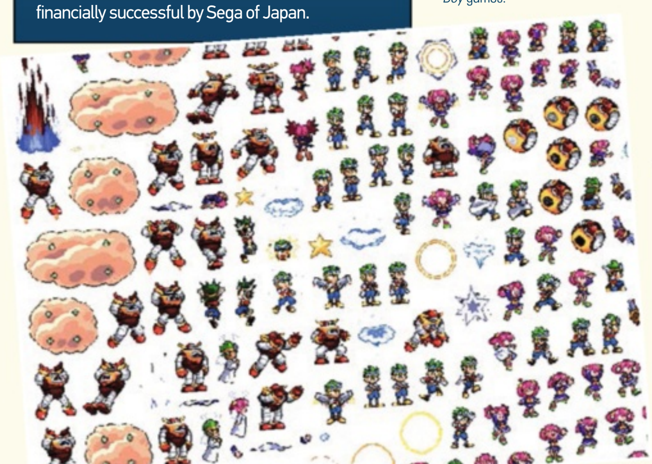
While development was taking place on *Wonder Boy In Monster World*, Nishizawa was hard at work on an arcade game called *Tokei Jikake No Aquario*, which has since been translated as *Aquario Of The Clockwork*. The game was developed for the Sega System 18 board and was a multiplayer action game with auto-scrolling levels, similar to *Monster Lair*. Enemies could be knocked unconscious by hitting or jumping on them, then could be tossed around the screen.

"*Aquario Of The Clockwork* was the last arcade videogame developed by my company. I had been working and suffering for a long time to complete it, but the location test results were poor. It was an ▶



MONSTER WORLD IN THE MODERN ERA

There are two separate *Monster World* compilations. The first was released as part of the Sega Ages 2500 budget line in Japan for the PlayStation 2, and includes all entries in the series on Sega platforms. In 2012, *Sega Vintage Collection: Monster World* was released worldwide on XBLA, PSN and Wii Virtual Console. Most importantly, this is the first time that *Monster World IV* and the arcade version of *Monster Land* had been officially released in English (the English ROMs for *Monster Land* floating around the internet are bootlegs). Strangely, the original *Wonder Boy* is missing, hence the game being called the *Monster World* collection rather than *Wonder Boy*. Additionally, *The Dragon's Trap* is absent. While this game is often deemed the best by fans of the series, it is considered the least financially successful by Sega of Japan.



» [Arcade] The sprites of *Aquario* seem to have the same colourful wide-eyed charm as the *Wonder Boy* games.



WHERE ARE THEY NOW?

Ryuichi Nishizawa is one of the co-founders of Westone, and often got his hands dirty in both coding and designing its games. He is still president of the company. Many of the long-time members have moved to different companies. The other co-founder, Michishito Ishizuka, left Westone in the mid-Nineties and went to work for Matrix Software, the development house behind *Alundra*, the *Final Fantasy III* remake and *Final Fantasy: The 4 Heroes Of Light*. Shinichi Sakamoto, the composer of many of Westone's games, is now a producer at Media Vision, the company that previously developed the *Wild Arms* series for Sony, though unfortunately he no longer composes music. Maki Ohzora, a graphics designer and character illustrator, is a prolific artist and drew the artwork for the goofy comedy *Evangelion* spin-off manga *Petit Eva: Bokura Tanken Doukoukai*.







THE DNA OF… WESTONE BIT ENTERTAINMENT

Colourful Character Designs
The characters in Westone games, particularly *Wonder Boy/Monster World*, are colourful, wide-eyed and full of energy.

Constant Innovation
With six games in the core *Wonder Boy/Monster World* series, none of them are entirely alike, ensuring that gamers are offered plenty of new gameplay experiences.

Action Role-Playing
Wonder Boy In Monster Land was one of the earliest games to combine solid arcade action with RPG elements. Many later Westone games and titles from other companies followed suit.



Memorable Sound Effects
The cartoonish "thwacks" of enemies taking hits, the chimes of bouncing coins – the distinctive sound effects have a personality of their own.

Excellent Music
Shinichi Sakamoto is a consistently excellent composer, and all of his soundtracks are of extremely high quality.



Expert in Many Genres
Outside of the *Wonder Boy/Monster World* games, Westone has created sports games, traditional JRPGs, run-and-guns, dating sims and many more.



Sense of Humour
In the *Monster World* games, you can buy alcohol to get hints, get passwords from purple smoking pigs and play goofy quizzes with the Sphinx.

Hugely Influential
Many games followed in *Monster Land*'s footsteps, including Namco's *Legend Of Valkyrie* and WayForward's *Shantae*.



"It's because I got absorbed in Wizardry… I wanted to combine RPG elements with an action game"
NISHIZAWA ON THE ROOTS OF MONSTER LAND

▶ eccentric action game with three-player simultaneous play. The graphics were quite excellent, but it was not released, unfortunately."

Nishizawa was able to obtain the ROMs from the company's archives, and has been working with emulation house M2 to reassemble them in working order. Unfortunately as of press time, the game has not been able to be restored to full functionality, although Nishizawa was able to dig out some of the sprites from the game's source code. The soundtrack, composed by Shinichi Sakamoto, was also released digitally through the Japanese website EGG Music.

Nishizawa returned to the *Wonder Boy* series (in a manner of speaking) with *Monster World IV*. The reason why 'Wonder Boy' is no longer in the title is due to the change in protagonist – the hero is now a green-haired girl named Asha – and the game world is closely influenced by Middle Eastern styles.



» A sketch of the Transom, the walking tank from *Aurail*.

Nishizawa explains the change in the leading role. "Because of the constantly changing nature of the series, it was necessary to come up with something new and different from *Wonder Boy In Monster World*. With the best of intentions, I wanted to betray the expectations of the fans, but in a good way. About the protagonist becoming a female, there were some pros and cons – some from within the team – but I was glad to change it to a girl. Asha's running animation is incredibly adorable."

Sadly, Sega decided not to release the title outside of Japan. Even Nishizawa is not sure of the reason. "At that time, Sega of America and Sega of Europe just decided not to sell it. They may have thought it would not have been commercially successful. Alternatively, there may have been other big titles at the time, and they may just have been too busy."

Outside of the *Wonder Boy/Monster World* titles, Westone also worked on a handful of other titles during the 16-bit era. Amongst the most interesting was a Super Famicom RPG published by Enix called *Dark Half*, where the viewpoint is split between two characters: the noble hero and the demonic super-villain. Nishizawa has some interesting stories to tell surrounding the game's development.

"The development of *Dark Half* was very memorable for me. It was the first time we worked with Enix, and there were many meetings. Yutaka Hirata was in charge of planning this game. He devised the idea of playing as an evil overlord. But in the middle of the development period, the game wasn't as fun as we'd initially hoped it would be. To solve this problem, I joined the project midway through. In addition to slightly modifying the game systems, I rewrote all of the scenarios from scratch. To complete this in a short period of time, I locked myself in a conference room in the Enix HQ for one month. I was always together with Watanabe-san, a producer at Enix. We ate lunch and dinner with each other every day, and we became friends at this time. With his help, I was able to complete the scenario. That's the first and last time I ever wrote seriously on a game's scenario."



» [Mega Drive] *Wonder Boy In Monster World* isn't quite as good as *The Dragon's Trap*, but it's still a solid action-RPG.

» [Saturn] Sadly for wombat fans, *Willy Wombat*, a comical animal superhero game, remained a Japanese only exclusive.



Westone's next title for Hudson was *Willy Wombat*, an action game with artwork by famed *Famitsu* illustrator Susumu Matsushita. "The concept was to create a hero that didn't take himself too seriously. So, the image we wanted was 'Sonic plus Batman'. It blends 2D sprites with 3D environments into a platforming game with an overhead perspective."

The game was the company's first 32-bit title, but it didn't originate like that. "Initially it had been developed as a side-scrolling action game for the SNES, but since the market began to shift from 16-bit to 32-bit there was a change in the development policy, and so it was reworked for the Sega Saturn." Alas, despite having full English voice acting, Hudson opted not to release *Willy Wombat* outside of Japan.

Unfortunately, most of Westone's games after *Willy Wombat* were not released outside of Japan either. After developing the adorable *Milan No Arubaito Collection* for the PlayStation, the company specialised mostly in anime spin-offs, like *Akihabara Dennougumi Pata Pies!*, *Digi Carat Fantasy* and *Neon Genesis Evangelion: Ayanami Raising Project*, as well as *Marriage* and the *Graduation* series for 32-bit platforms. These being mostly life-sims and dating games, they were of little interest to non-Japanese gamers. Of these later releases, the only one localised was *FishEyesWild* for the Dreamcast, which was published by Natsume in North America and retitled *Reel Fishing: Wild*.

In addition to videogames, Westone also developed a number of toys for Takara. The most interesting of these is a device called Bowlingual, which translates dog barks into human language. This was accomplished by sampling dog barks under certain conditions, then using these to interpret what the user's dog might be trying to tell them. Although some have questioned the accuracy of the device, it was impressive enough that *Time* magazine awarded the device as one of the best inventions of 2002.

Nishizawa reminisces about some of his company's best games. Amongst the *Wonder Boy* titles, his favourite is *The Dragon's Trap*. "I loved it so much I made it twice," he says, referring to the Game Gear port. He also expresses a fondness for *Aurail*. "The music and the 3D scenes of *Aurail* are some of my favourites. I modelled the 3D characters myself and it was a challenge to display a game in 3D. I also liked *Mirano No Arubaito Collection*. I wanted to work on a game with 2D animation [while] the game market was focussed on 3D. It didn't sell at all, but I created a t-shirt. This t-shirt is supposedly an extremely rare item, but I couldn't find any images of it on the internet."

Unlike many larger companies from back in the 8 and 16-bit era, Westone is still active. "We have been working on social games for use on smartphones for the Japanese market. We are not doing any original planning. We are also involved in website operation and maintenance," reveals Nishizawa. However, the company's presence has made it easy for its titles to reach digital download services.





» [Arcade] The only known screenshot of *Aquario Of The Clockwork* is an old photograph from a Japanese blog describing the play-test.



DEFINING GAMES

Wonder Boy



Westone's first videogame stars a young boy named Bocke as he leaps dangerously through a variety of perilous jungles, caverns and castles to save his girlfriend Tina from a gang of evil warlords.

Wonder Boy III: The Dragon's Trap



The Dragon's Trap has a greater emphasis on exploration, with each power granting access to new areas and power-ups. Bocke has been cursed and can change into different animals.

Monster World IV



While the RPG aspects of its forbears are scaled back in favour of platforming and some light puzzle solving, *Monster World IV* features arguably some of the prettiest visuals available on the Mega Drive.

Aoi Blink



Based on the anime series by Osamu Tezuka, this PC Engine title has the player controlling three characters at once, with the two characters acting as shadows similar to *Ninja Gaiden II* on the NES.

Mashin Eiyuuden Wataru Gaiden



An action-RPG based on the *Mashin Eiyuuden Wataru* series. While the overhead exploration sections look like *Final Fantasy*, the battles play a lot like *Wonder Boy In Monster Land*.

Riot City



Riot City borrows from *Final Fight* more than most beat-'em-ups. Released in the arcades and then later ported across to the PC Engine, *Riot City* is a decent videogame, in spite of its shameless aping.

Dark Half



A collaboration between Westone and Enix, *Dark Half* features two protagonists – an evil warlord who slaughters innocent villagers to increase his power and a heroic knight that must stop him.

Blood Gear



This 1994 PC Engine Super CD title, co-produced with Red Entertainment, is a side-scrolling mecha action-RPG that is similar to Square's *Front Mission: Gun Hazard* in a variety of ways.

Milan No Arubaito Collection



This PlayStation title is a series of simulations and mini-games featuring a cutesy girl in a small town. The 2D animation is gorgeous, and it begs you to wonder what a *Wonder Boy* title would've looked like on 32-bit systems.

LEVEL 2 SPEED

MINED-OUT!

Trace the classic Windows game Minesweeper back far enough and you will reach Mined-Out. Graeme Mason speaks to its creator and future Incentive boss, Ian Andrew



IN THE KNOW

» **PUBLISHER:** QUICKSILVA

» **DEVELOPER:** IAN ANDREW

» **RELEASED:** 1983

» **PLATFORM:** ZX SPECTRUM

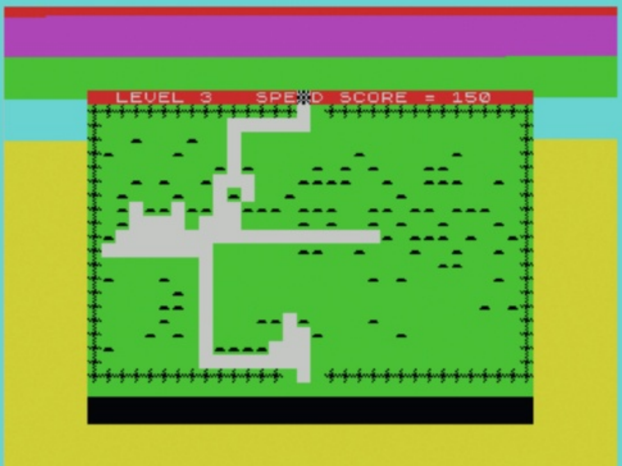
» **GENRE:** PUZZLE

Chances are that if you bought a PC with Microsoft's Windows operating system in the early Nineties, one of the first games you played would have been *Minesweeper*. A devious puzzler, it involved clicking on squares in a tiled grid and determining the location of the hidden mines thanks to numerical clues given. Racing against the clock to get the best time added a stiff challenge to the overall concept.

Yet the origin of *Minesweeper* can be traced back many years, possibly even to the Sixties, with logical guessing games one of the few genres that could be implemented on the computers of the time. With the advent of videogaming proper in the Seventies, it apparently took until 1983 for the idea to be expanded upon, not only in terms of gameplay but also graphically.

Ian Andrew began his short programming career with a simple snake game on his first computer, a ZX81. Like most, the limitations of that machine's graphical display meant the real excitement was reserved for the ZX Spectrum with its 'full colour display', larger memory and faster processing capabilities. Ian casts his mind back to how he stumbled upon the idea for *Mined-Out*. "I think my thought process went along these lines: I noticed that the control of the screen from BASIC was basically blocks of eight by eight pixels. Thinking about what type of game I could make with blocks, I had the idea to 'move through them'. But that was no game, so I wondered what would make that a puzzle of some kind?" Ian pauses, reflecting on the next step in the evolution of what would become *Mined-Out*. "Why not make the blocks invisible? And how can I give clues to stop it being random?" The result hit the young programmer like a bolt from the blue. "Proximity! Eureka!"

The objective of *Mined-Out* is simple. The player must traverse each blank screen under which lie an increasing amount of hidden mines with the ultimate goal being Level Nine and rescuing the hapless annelid Bill the Worm. After each move, the game helpfully tells you how many mines there are on the adjacent spaces (no diagonals here, this is BASIC after all!). As you progress, the game adds female worms who can be rescued for extra points as well as additional hazards such as a mine-layer (self-explanatory) and a bug – essentially a mine on legs. And perhaps most deviously, from Level Six your path disappears, leaving you just with your memory to rely on as to where behind you is safe. Clearly *Mined-Out* is the product of a nefarious mind. "The game quickly evolved," says Ian, "and I wanted it to be commercial. So I knew it had to 'progress' and have variety. I kept adding features to later levels to keep it interesting for as long as possible."

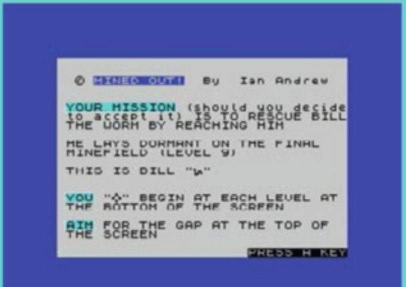


» [Spectrum] As the levels increased, more and more mines were spread in your path.

Mined-Out took Ian Andrew about three months to program, in between running his picture card shop in Reading. "It was not a problem. I ran the mail-order business and shop during the day and programmed in the evenings. I love multi-tasking." Despite being overall very pleased with the game, the limitations of BASIC frustrated Ian, in addition to his own shortcomings. "Better sound and graphics would have been great but the latter was never my strong point and I had no idea how to." he admits. Programming in BASIC almost meant a two colour per block limit and being unable to conjure the dark art of machine code resulted in the game being much slower and less stable than Ian would have wished. Nevertheless, for a first-time effort he was extremely satisfied and after spotting an advert for games by popular early publisher Quicksilva, swiftly despatched *Mined-Out* to the company. "I sent it in and they accepted



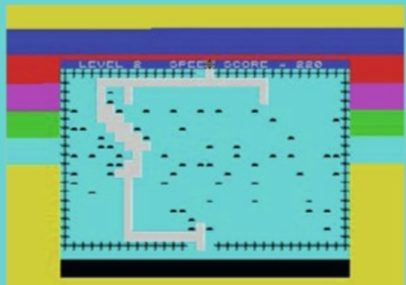
» [Spectrum] Complete a level and you were treated to an action replay.



» [Spectrum] A nod to *Mission: Impossible* in the instructions.



» [Spectrum] Mine-layers would flash from left to right laying, err, mines.



» [Spectrum] A tortuous path to completing Level Two.

it," he says matter-of-factly, "and I went and signed the contract at their offices and met the partners." As one of the premier software publishers in 1983, Ian feels he was lucky to choose Quicksilva. "I loved them. They were enthusiastic, talented, successful and honest. Some other publishers seemed not to give developers such a fair deal as they did for me."

Quicksilva ensured *Mined-Out* received reasonable exposure and also released the game on the BBC, Electron, Oric and Dragon 32, the latter two versions programmed by Ian Andrew's brother Chris. With a proper keyboard and faster processor, Ian feels it's a better game. Despite this, the Spectrum version was a moderate hit, which surprised the young coder. "I was taken aback when I heard it was a hit, because it wasn't written in machine code like many previous chart-toppers. I was very pleased and it was a huge buzz from having a hit game. I seem to remember receiving several cheques for a few thousand pounds each, maybe over £20,000 in a year which was a lot of money 35 years ago, especially to a 22-year old boy!" he recalls with a smile.

Eventually, the success of *Mined-Out* would have a more profound and long-lasting effect on Ian Andrew. The money he made from the game inspired him to enter the software market himself and create the famous Incentive label, that would go on to release several iconic games and programs on the 8-bit computers such as the Graphic Adventure Creator and the Freescape series. Unsurprisingly he has fond memories of *Mined-Out* and the influence it has had. "It would have been nice to have had a credit on Minesweeper," he grins mischievously, "yet I still think that is a more frustrating game than *Mined-Out* due to the way that you are forced into making random decisions that could instantly result in Game Over. With *Mined-Out* you *never* had to guess – you can always find another way and deduce a route. That was the beauty of the game."



» [Spectrum] Why are there boobies in a bubble? "I've no idea!" – Ian Andrew.

Many thanks to Ian & Chris Andrew and Damien Moore of the Authoritative Minesweeper for their time.



» [Spectrum] Attempting to rescue damsels while being hounded by a bug was not an easy task.

UNDER THE INFLUENCE

Damien Moore on Mined-Out's link to Minesweeper

"I didn't actually play *Mined-Out* at the time because it came out the year I was born," laughs Damien Moore, creator of the Authoritative Minesweeper website and world rankings in 2000, "but it is the earliest game I can find with the goal of crossing a grid using numbers to avoid objects." Damien concedes that while there are examples from the Seventies of games that utilised a grid and gave co-ordinates to a help locate an object, it is likely that *Mined-Out* is the closest relative of *Minesweeper*. Tracing the actual lineage has proved more troublesome. "I can prove from talking to game authors that there is a direct link between *Relentless Logic* [*Minesweeper*'s immediate forebear] and *Minesweeper*, but I've been unable to contact the *Relentless Logic* authors to establish if they'd come across *Mined-Out*. However, *Mined-Out* appears to be a novel idea with its numbers and mines, and given the way programmers used to unabashedly borrow from each other, I'm pretty confident it was an influence on *Minesweeper*."



DEVELOPER HIGHLIGHTS

SPLAT!
SYSTEM: ZX SPECTRUM, SAM COUPE
YEAR: 1983

MOON CRESTA (AS INCENTIVE)
SYSTEM: ZX SPECTRUM, COMMODORE 64
YEAR: 1985

DRILLER (AS INCENTIVE)
(PICTURED)
SYSTEM: AMSTRAD, COMMODORE 64, ZX SPECTRUM
YEAR: 1988

Minority Report



Often dismissed as nothing more than knock-off trash, Chinese PC games – RPGs in particular – actually have a rich and vibrant history that's well worth looking into. Kerry Brunskill reveals some of the highlights



» [PC] Even RPG heroes need a break every now and then.

XIN XIAN JIAN QI XIA ZHUAN

■ DEVELOPER: CRAZY BOYZ ■ YEAR: 2001

■ **To be brief, *Xian Jian Qi Xia Zhuan* is the *Final Fantasy* of Chinese RPGs. If a Chinese gamer's ever played one of their home-grown RPG series it'll be this one.** And, much like *Final Fantasy VII* fans endlessly debate whether Cloud should have gone for Tifa or Aerith, *Xian Jian* fans talk about whether leading man Li Xiaoyao was meant to be with Zhao Ling'er or Lin Yue Rue.

Originally a 1995 DOS title, the game had a Windows update a couple of years later, then a Japanese Saturn release in 1999 (yes, really), before heading back home to PC two years after that and finally getting this loving remake that enhances and expands upon the basic game.

Unlike sister series *Xuan Yuan Jian*, every *Xian Jian* game is part of a single consistent timeline. That doesn't necessarily mean that they follow a linear path or that they can't be enjoyed as individual stories in their own right, but there is an overarching sense of time and consequence in the *Xian Jian* world that other role-playing games can lack.

And boy, are there ever consequences in *Xian Jian*.

Without wishing to spoil too much, you can expect even the most hardened soul to break down in tears at some point in a *Xian Jian* game; killing off important characters or putting them through some emotional torment is par for the course here. What makes all this tragedy bearable is that when they aren't being put through the wringer – everyone has very natural and relatable personalities. Sure you'll see them cry – but you'll see them laugh too. And



» WIND FANTASY SP

■ DEVELOPER: FUNYOURS ■ YEAR: 2000

■ ***Wind Fantasy SP*** is an award-winning early entry in an epic RPG series that would go on to eventually span eight single-player RPGs and an MMO. Like most *Wind Fantasy* games, *SP* is an SRPG using their unique 'RAP' system – a mechanic that grants the user more freedom by allowing them to spend points to perform actions rather than be forced into the usual move-attack-guard rotation. As you'd expect from any good strategy game there's a whole host of spells, skills and equipment to use and with three difficulty levels to choose from and multiple endings to see there's plenty of reason to keep this game installed even after the final boss fight.



» EMPIRE OF ANGELS III

■ DEVELOPER: SOFTSTAR ■ YEAR: 2002

■ **The final (and bizarrely fourth)** *Empire Of Angels* game mostly ditches the 3D graphics from series spin-off *New Empire Of The Angel* and returns to its sprite-based roots. While this may be the last game it didn't stop Softstar adding new features, although it thankfully left the fantasy artwork and humourous battle animations that have been part of the series since the first game's DOS debut alone. The game may have no room for idle wandering but players can still easily make their own mark on the game by promoting the units under their command into a wide variety of classes, tailoring the troops to suit their own style of play.



» NEW TWIN HEROES

■ DEVELOPER: USERJOY ■ YEAR: 1999

■ **So how can** you have a 'New' *Twin Heroes* game when there wasn't an 'Old' *Twin Heroes*? Simple! The original *Twin Heroes* saga was a series of books written in the late Sixties by Taiwanese wuxia novelist Gu Long. Userjoy's videogame adaptation may take some liberties with the original plot but that didn't stop the game from winning numerous 'best domestic game' awards at the time. Lead character Xiao Yu'er and everyone else in the game does look a little basic by today's standards but these simplistic pre-rendered sprites are expressively animated and do a fine job of bringing the tale to life.

» [PC] Flying swords are the mark of a true master in the *Xian Jian* world.



» [PC] Little details like these birds really bring the game to life.



lie. And love. And get hit over the head with a frying pan. *Xian Jian* excels at creating people, characters with names and feelings that don't always agree with each other and don't go off killing monsters just because that's what RPG heroes are supposed to do.

Battles are turn based, *Xin Xian Jian*'s unique mark on this typical RPG requirement being a set of combination attacks that the party can team up to perform. For once older equipment is no longer something to be sold as soon as the next town shop shows up either, as pretty much any item in the game can be lobbed at unsuspecting enemies in battle, injuring them and sometimes inflicting useful status effects too. Thanks to some thoughtful UI design all battle commands can be selected very quickly, meaning that encountering the enemy rarely results in a long battle or feels like a chore.



Fast battles are definitely a plus when you're faced with dungeons that make *Phantasy Star 2* look like a casual stroll in the park – if *Xian Jian* has one negative it's winding multi-level dungeons filled with so many switches and locked doors that you can only assume the creators had some sort of bulk-buy discount on the damned things. In spite of this flaw *Xin Xian Jian* is a true classic and an influential game even today.

» ABOUT CHINESE GAMES

- Chinese games are almost always released on PC; consoles don't usually receive official releases there.
- Technically speaking, games tended to be 'behind' compared to what the rest of the world was creating, but Chinese developers have long since caught up.
- The combination of a large and profitable market at home with the tendency to create wordy RPGs means there's little interest or money in making worldwide releases.



» [PC] It's not as bad as it looks – that's his future wife!



» XUAN YUAN FU MO LU

■ DEVELOPER: DOMO ■ YEAR: 2001

■ **It makes sense** that the stepping-stone between the pure pixels of *Xuan Yuan Jian 3* and the full 3D *Xuan Yuan Jian 4* would use a mix of 2D sprites overlaid onto a polygonal map. A complete departure from anything in the series before or since, this SRPG did receive criticism at the time for its simple plot in comparison to its exceptional stable mates but that doesn't stop *Xuan Yuan Fu Mo Lu* from being a good game in its own right. The small party size means battles always move at a fair clip, and while it'll likely never be accused of being a deep game, there's plenty of fun to be had here regardless.



» THE SEVENTH SEAL

■ DEVELOPER: SOFT WORLD ■ YEAR: 2002

■ ***The Seventh Seal*** is a great example of what happens on those rare occasions when East-meets-East; an excellent RPG blending the fantasy world of Taiwanese author Nalan Zhen's books of the same name with a soundtrack partly composed by *Chrono Trigger* composer Yasunori Mitsuda. Battles use a high/medium/low attack system – much like a good fighting game a high kick will always miss an enemy low to the ground, and a sweep's no use against an adversary that isn't touching the floor. The pace of these fights is such that blows are always being exchanged, so players need to keep their wits about them if they want to survive.



» TIAN DI JIE: SHEN MO ZHI ZUN ZHUAN

■ DEVELOPER: DYNASTY INTERNATIONAL ■ YEAR: 1991

■ **The *Tian Di*** *Jie* trilogy got off to a poor start – when *Shen Mo Zhi Zun Zhuan* released as a budget title with overly difficult battles and prone to crashing it really didn't make the best first impression. Lucky for us then that instead of giving up Dynasty went back to the drawing board, cleaned up the bugs, tweaked the gameplay and were even gracious enough to give gamers a new ending too! This SRPG may be the first in the trilogy but it's actually the last game in the story – the other two *Tian Di Jie* games released after this one are both prequels.

Minority Report



» [PC] A weaving of historical events and fanciful fantasy makes this an essential play.



» [PC] Up to four players can battle enemies at the same time. Very handy.

XUAN YUAN JIAN 3: YUN HE SHAN DE BI DUAN

■ DEVELOPER: DOMO ■ YEAR: 1999

■ **Without doubt a high point of the RPG genre, *Xuan Yuan Jian 3* expertly weaves real historical events with original fantasy elements to create something truly memorable.** The game opens in 8th Century Venice although it doesn't stay there for long; the story wandering everywhere from Damascus to ancient China.

There are only four main characters, although seeing as only one of them is alive in the traditional sense there's never a dull moment and their diverse personalities have plenty of time to shine. Battles allow all four party members to fight at once, so there's no switching out or worrying about who's not getting XP this time around. From time to time the team are joined by battle-ready friends eager to help out.

Locations are more varied than you'd expect – European monasteries, ice caves, sprawling deserts and pirate ships are all there to be explored, and RPG law dictates these areas also tend to be dungeon-like areas crawling with monsters. Thankfully these places are quite straightforward; there's treasure to be had for those that go looking for it.

Beautiful sprite work and an epic tale come together perfectly here to create an RPG that's hard to beat!

» YOUNG GATT

■ DEVELOPER: GAMEDRAGON TECHNOLOGY ■ YEAR: 2003

■ 'A boy and his dragon go on an adventure' doesn't sound like the most exciting tale at first, but as the game reveals more layers and secrets it becomes hard to put down.



» XIAN JIAN QI XIA ZHUAN 2

■ DEVELOPER: CRAZY BOYZ/DOMO ■ YEAR: 2003

■ Set eight years after the first game and with the daughter of the original hero along for the ride, *Xian Jian 2*'s theme of forgiveness makes for a compelling RPG.





» FANTASIA SANGO

■ DEVELOPER: USERJOY ■ YEAR: 2003

■ **While *Fantasia Sango*** may technically be set within the famous Three Kingdoms era of Chinese history it plays pretty fast and loose with this framework, using it to tell an original fantasy story rather than merely retread over well-worn ground. Battles are turn-based, with up to six party members at once arranged in a formation on a five-by-five grid. Attacks can be timed so that party members can chain their attacks together to form a combo, leading to frenetic battles and spectacular damage bonuses. Later games in the series all use the excellent style and systems laid out in this first entry, it just works that well.



» ETERNAL SAGA

■ DEVELOPER: GAMEONE ■ YEAR: 2001

■ ***Eternal Saga* is** a one-off; a real shame for a game as stunning as this. The story won't win any awards – it's a pretty standard 'young swordsman leaves home with childhood friend to find cure for illness and ends up on a great adventure' affair – but the hand-drawn backgrounds and wonderfully chunky low-poly character models make the game so charming you'll find yourself caught up in the atmosphere anyway. This game is one of very few Chinese role-playing games to see release outside its home country, as it was eventually published in Japan by Sunsoft under the alternative name *Eternal Odyssey*.



» YUE YING CHUAN SHUO: JIAN XIA QING YUAN WAI ZHUAN

■ DEVELOPER: XISHANJU ■ YEAR: 2001

■ **Many Chinese RPGs** ape the Japanese style, however developer Xishanju went against the grain and took a distinctly Western approach with *Yue Ying Chuan Shuo*, creating something more like *Baldur's Gate* than *Dragon Quest*. Conversation choices during dialogue not only affect the hero's personality but change the ending too, so player choices really make a difference. All events occur in real time, including battles. It's not the most engaging game, but those that are patient will find a rewarding action-RPG here.

XUAN YUAN JIAN 3 WAI ZHUAN: TIAN ZHI HEN

■ DEVELOPER: DOMO ■ YEAR: 2000

■ Set over a century before *Xuan Yuan Jian 3* and with a more overtly Chinese style, *Tian Zhi Hen* had the unenviable task of not only following up a stunning RPG, but also telling a new story within the same world.

Due to the incredibly short development time a lot of graphics and battle mechanics are lifted directly from its parent game, but there are still more than enough changes to stop this prequel feeling like a cheap fan hack – the most obvious one is probably the exquisite hand-painted artwork used in certain areas. Battles weren't left alone either – there may only be a maximum of three participants this time, but that's no problem when there are only three main party members anyway. All attacks and spells are now aligned to one of the five traditional Chinese elements (that's fire, water, earth, metal and wood) and as you'd expect water is very effective against fire while less so against wood or metal.

The regard in which *Tian Zhi Hen* is held in cannot be underestimated. Even though more than a decade has passed since it came out the game is so ingrained with Chinese gamers that it spawned both a successful MMO and a TV series in the past few years.



» [PC] The enemies that you encounter are odd in the extreme.



» [PC] The art design in DOMO's game is absolutely stunning.

» WIND FANTASY 2: ALIVE

■ DEVELOPER: WINDTHUNDER ■ YEAR: 2002

■ The only game in the series to play more like a traditional role-playing game than an SRPG, but that didn't stop this oddball entry from being a great game.



» NEW LEGEND OF CHU LIU XIANG

■ DEVELOPER: USERJOY ■ YEAR: 2001

■ The internal file name calls this game "Chinese Robin Hood", which sums the hero up quite nicely. *Chu Liu Xiang* is yet another successful novel-to-game adaptation by Userjoy.





» WULIN QUN XIA ZHUAN

■ DEVELOPER: SOFT WORLD ■ YEAR: 2001

■ **Have you ever** found yourself longing for an RPG with real freedom, with a hero you can really leave your mark on and customise to your heart's content? Then *Wulin Qun Xia Zhuan* is the game for you. As an RPG hero you're naturally given the opportunity to master the usual sword fighting and hand-to-hand martial arts, but there's far more to the game than just getting good at beating people up. Tea making, fishing, Chinese chess, painting… these are all fields of expertise that go towards creating a refined warrior, making *Wulin Qun Xia Zhuan* one of very few games to deal with both the spiritual and physical side of martial arts.



» HEROINE ANTHEM 2: THE ANGEL OF SAREM

■ DEVELOPER: WINDTHUNDER ■ YEAR: 2003

■ **More a refinement** than an innovation, although when the first game was so good that's hardly an issue. *Heroine Anthem 2* is a true sequel, starring many of the same characters as the original game and adding a few new faces for good measure. There's a distinct Norse theme to everything making the game a fresh-feeling adventure even for the most experienced RPG players. Energetic battles really make those beautifully animated sprites come to life, your chosen party of four knocking seven bells out of anything they run into with the game keeping tally of the total damage and number of hits as you go.



» THUNDER FORCE 2: REBIRTH

■ DEVELOPER: DYNASTY INTERNATIONAL ■ YEAR: 2002

■ **Near-future cyberpunk** SRPG *Thunder Force 2* wastes no time getting into the action; your experienced team of misfits are up to their armpits in cybernetically-augmented zombies right from the very first fight. The team's quirks extend into battle too; some characters are completely useless if caught up close to an enemy while others only really excel when they're soaking up the damage. With multiple attacks and unique skills to hand right from the off, *Thunder Force 2* neatly avoids the usual RPG issue of having a dull opening chapter that you want to plough through as quickly as possible.

BOULDE

Created by two Canadian programmers, Boulder Dash has become one of the longest running videogame franchises thanks to publisher First Star Software. Mike Bevan looks at the history of a foot-tapping fella named Rockford and his various appearances through the years

Determinism. It's a rather philosophical term to use when discussing a videogame, but it's a word that crops up several times when talking to Chris Gray and Peter Liepa, the co-creators of *Boulder Dash*. In a game involving retrieving diamonds and avoiding falling rocks, players make dozens of split-second decisions which affect elements of their cave environment, with a multitude of possible outcomes and ways to play through each level. It's the beauty of a well-loved franchise that has stood the test of time and is about to celebrate its 30th anniversary, with a rather nice little surprise for fans just around the corner…

"The original inspiration came about probably in the middle of 1982," recalls Chris Gray. "I would have been aged 14, and we had an Atari 2600 at home and eventually that led to the family getting an Atari home computer with a tape drive. Over that year I just went crazy just playing with gameplay mechanics and learning how to write games based on things that I played or were inspiring me, and I was sharing them with friends and getting more and more proficient at it."

Although there were several games in the arcades around the time involving tunnelling through earth, notably Namco's *Dig Dug* and Universal's *Mr Do!*, it was a less well-known coin-op that provided the creative spark for Chris. "*Dig Dug* would probably have been a year or so later," he confirms, "but there was another game called *The Pit* which inspired me to do something along those lines, but with rocks that had more behaviour. The original prototype was written in BASIC, and *The Pit* was the thing that got me thinking about the rocks, then I wrote algorithms to make the rocks fall and roll and shake, and just generally behave in a more interesting way.

"Around that time I'd also been dealing with a company in Mississauga, just outside Toronto. When I was a teenager I'd go into Toronto and there was a chain of stores called Electronic Playworld and I would go in and try and see the latest games because we didn't even have a floppy drive at home… So I'd get a great thrill of being in the city and playing the games and visiting arcades, and I got to know the owners and I found out they also had a company called Inhome Software, which was doing Atari 400/800 cartridge games.

"I had gone to them with the original idea for what became *Boulder Dash*, and at that point it was still in BASIC, so we were looking for a way to take it to the next level. They had a network of people they had been working with and Peter Liepa had approached them about making games, and they said 'We've got this person with this concept and we'd like

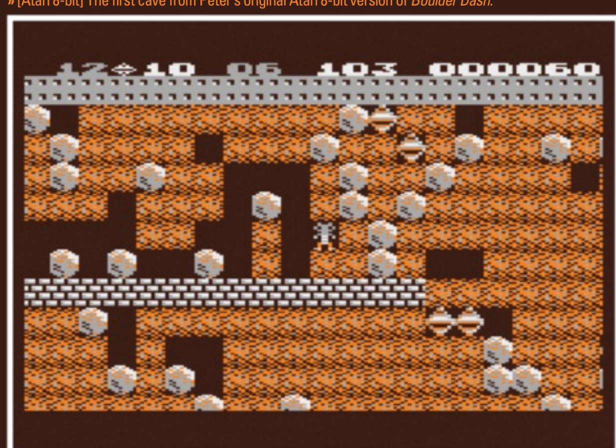


to make it more marketable so it would have to be in assembly language if it was going to be an Atari cartridge game.' And we were introduced and it kind of went from there.

"Peter started by taking what I had done in BASIC and creating a more elaborate algorithm in assembly language," says Chris. "This was before the game even scrolled. The original version didn't have any scrolling – Peter added that later." Twice Chris's age at the time, Peter was a maths graduate with an interest and background in physics, ideal qualities for programming a game with a reliance on falling boulders and a dynamic environment. But he admits that initially he was a little sceptical, finding the prototype's gameplay a little too "predetermined", only to be won over on realising the potential of the Chris's idea. "I started playing with basic elements of dirt, rocks and jewels and within a couple of days had built the basic 'physics engine' of what was to become *Boulder Dash*," says Peter. "I realised that using a random number generator you could generate random caves, and that by controlling the density of rocks and jewels you could get some interesting gameplay."

It was with the idea of using a degree of randomisation to generate the caves that Peter stumbled on the key to creating a captivating and diverse mix of action and puzzle-elements. "The physics were sufficiently rich that producing levels was surprisingly easy," he says. "It's funny how that works… each time you shuffle a deck of cards you get a new hand of solitaire, poker or bridge. I'm a fan of indoor rock climbing, and I'm fascinated by the endless varieties of routes you can generate by placing holds on a wall. In *Boulder Dash*, the rocks, diamonds and dirt were mostly placed with random number generators. The puzzles of navigating these mostly generated themselves. The other non-random

» [Atari 8-bit] The first cave from Peter's original Atari 8-bit version of *Boulder Dash*.



"Producing levels was surprisingly easy"
Peter Liepa

elements – like walls and exits – were there to mainly to give some focus or sequence to the puzzles." And what puzzles they were, including funnelling rocks through magic walls to transform them into jewels, dropping boulders onto fireflies to blast through barriers and unleashing swarms of butterflies on an expanding ameoba, creating a chain-reaction of explosively incarnated diamonds.

At the game's core was the insect-like hero of *Boulder Dash* – Rockford. "My early versions of the game used 8x8 pixel elements to represent a stick figure, dirt, rocks and jewels," says Peter. "Our early would-be publisher thought this was not engaging enough, and that 'the man' should be larger and more identifiable. So I ended up doubling the size of everything to 16x16 pixels and giving 'the man' a more recognisable look and some animations [including his charismatic blinking and foot-stamping]. It was First Star who eventually gave him the name Rockford."

"I just so happen to be the person that opened the envelope containing the floppy disc that Peter Liepa had submitted to First Star Software," reveals Richard Spitalny, co-founder and president of the company that has overseen every *Boulder Dash* game for three decades. "I booted the game myself and was hooked immediately. I remember that I did that while I was rushing to leave the offices and I could only spend a minute or two to take a quick look to see if it was something I would pass on to have reviewed. I was able to get into the game easily and quickly because it was so simple and intuitive. I enjoyed the unique challenges, the 'mental gymnastics', of the caves coupled with the hand-eye and quick reflexes needed to avoid falling boulders and enemies. It was like nothing I had ever played. Needless to say, I was late to my appointment!

"What Peter submitted to us was fairly close to the finished game. We asked for additional colour palettes and we came up with the idea of inserting non-scrolling caves as bonus puzzles. Players would still advance to the next cave, even if they didn't conquer the bonus cave … they simply provided a way to earn additional points and to break up the gameplay a bit. We worked a lot with Peter in setting the difficulty ramping. We all knew that it was very important to introduce new elements slowly and carefully. It was a delicate balance in terms of challenging players without frustrating them, which is why you could skip ahead every fourth cave. In addition to the underlying core elements and cave designs, which Peter implemented brilliantly, I really liked the ability to push, grab and dig without moving. I also really liked what the amoeba added to the game, as well as the explosions of fireflies and butterflies. I would say that Cave M is my favourite cave in the original game.



» [C64] The ingenious 'funnel' cave had you pouring rocks through a magic wall to create diamonds.

"I was very confident that the game was going to be a hit as soon as I played it… even before it was the final game. But I had no idea it would be so phenomenally successful. Our very good friends, the much missed Bill Kunkel and Arnie Katz, founders and editors of *Electronic Games* magazine, fell in love with *Boulder Dash* the moment they first saw it. Their initial review as well as many others from all of the leading magazines of the day contributed to the game's success. *OMNI* magazine named it number three in their 'Ten Best Video/Computer Games'; *Family Computing* selected it as 'Arcade Game Of The Year'; Personal Computer named *Boulder Dash* 'Game Of The Year' and *Computer Entertainer* selected it as their 'Atari Computer Program Of The Year'. A Commodore 64 magazine in Europe named *Zzap!*, with our permission, adopted Rockford as their mascot and would draw him in the margins of random pages in every issue for years and years!"

"It was very important to build on the momentum achieved with the Atari version and port to Commodore 64 and Apple II, and to license the game internationally so that it was supported on numerous platforms not found in North America," asserts Richard. "It quickly became a huge success in Europe and Japan." The huge impact of the game quickly led to a sequel,

THE BRITISH CONNECTION

The Pit, Chris's inspiration for Boulder Dash – made in sunny Blighty!

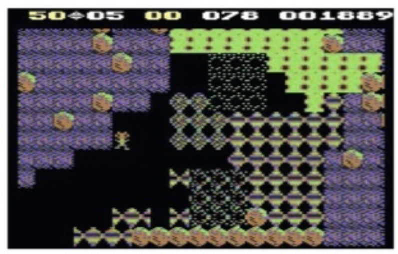
As Chris has confirmed in our interview, the inspiration for what became the original *Boulder Dash* stemmed from an arcade game called *The Pit*, released by Florida-based arcade manufacturer Centuri in 1981. The single screen coin-op title featured many elements that he integrated into his Atari prototype – levels are completed by grabbing the required amount of diamonds and you can dig under and dislodge rocks to block or trap chasing enemies, although you can't destroy them by dropping boulders on them.



Regular **RG** readers might be aware that *The Pit* was designed by UK-based company AWL Electronics, headed by Andy Walker, later supremo of C64-centric software house Taskset. This is a fact that Chris is surprised and delighted to be told. "I never knew that," he exclaims. "I was quite young and just sucking up the world of games like a sponge at that point – my father was British and a corporate lawyer and he helped me try and understand the need for putting together contracts for *Boulder Dash*!" We thought it might be fun to report how AWL's game inspired Rockford's first outing to the man himself. "That's really heartening," says a flattered Andy. "I honestly never heard from Chris before, and it's a most agreeable confirmation. Please send him my best regards and guarantee of a fine cask of ale on his next Yorkshire visit… he's been through those long hours of development *and* he got published!"



» [Spectrum] This cave provided multiple ways to get Rockford accidentally trapped…



» [C64] The butterflies versus ameoba encounter in Cave M is a true *Boulder Dash* classic.

"I was very confident that the game was going to be a hit as soon as I played it"
Richard Spitalny

also designed by Peter – *Boulder Dash II: Rockford's Revenge*. The game introduced a couple of new elements – walls that expanded horizontally when earth was dug out around them and a blue slime that slowed falling diamonds and rocks for a short time. "*Boulder Dash II* was a pleasure to produce, because most of the hard work had already been done, so all of the effort could go into producing more novel caves," says Peter. "I didn't produce any versions after that, although I was called in for a couple of days to create caves for a later sequel, *Rockford*."

While *Boulder Dash II* was well-received, the third instalment of the franchise was seen as a bit of a let-down, due to its ill-advised 'space'-themed visuals and the fact some levels were buggy and impossible to complete. "*Boulder Dash III* was developed and released by [Swedish company] American Action and it was somehow brought to our attention before it was released," comments Richard. "We made the mistake of letting them release the game in exchange for a royalty advance, rather than shutting them down and keeping the game out of the market. Obviously that was not the best thing to do for the brand. But I think everyone would agree that in the long run it didn't matter that much and hasn't really hurt the brand over time…"

After this minor setback for Rockford, First Star bounced back with a unique gift for fans with an opportunity to create their own levels with *Boulder Dash Construction Kit*. But, we ask Richard, after the enormous popularity of the first two games wasn't this a case of killing the golden goose, so to speak? "There was a lot of debate about whether or not to develop and release an editor which would let everybody and anybody design their own *Boulder Dash* caves," he confesses. "At the time, I don't think that we were looking out into the future as much as one might've expected. We were also very much focussed on the *Spy Vs Spy* games and it was not very easy for people to exchange caves with each other back then like it is now."

Richard is also eager to discuss Rockford's various arcade ventures, starting with a version of the original game manufactured for arcades by Exidy. "Working with Exidy on having *Boulder Dash* released into the coin-operated arcades was incredible," he says. "It was very exciting and I don't believe that any home computer game had been brought from the home into the arcades before that. At that time, games were always released in the arcades first and, if they did very well, then they were ported for home computers or videogame consoles. Of course, what Exidy did was to house Atari computers inside coin-operated arcade cabinets. However, the two arcade ▶



» [C64] *Boulder Dash III*'s space setting was rather controversial.

BOULDER DASHED

Other videogames that owe a debt to Rockford's original adventure

REPTON



■ One of the BBC Micro's most famous games, *Repton* was the brainchild of 15-year old Tim Tyler, who was inspired by reading a magazine review of *Boulder Dash*. There are certainly similarities, although its lizard-like main character and surroundings are comprised of larger graphic tiles, and there are original elements like the keys and the monster eggs which hatch into enemies when toppled.

ICICLE WORKS



■ Published by Commodore for the C16 and Plus/4, Icicle Works was a *Boulder Dash* clone that replaced Rockford with a little bloke that looked an awful lot like Santa and the jewels were presents that formed the image of a toy as you collected them. It was a pleasant enough diversion with devious puzzles, and dropping snowballs on penguins and polar bears was always good for a laugh.

SUPAPLEX



■ *Supaplex* was published by Digital Integration, a company better known for flight simulators than arcade-puzzle games, and featured a player-character with a striking resemblance to a red Pac-Man. Its levels were generally more maze-like than *Boulder Dash*, with a circuit-board theme built up of tiled floppy discs and microchips. One nice touch was the animated roll of the boulders as they fell.

EMERALD MINE



■ This Teutonic take on *Boulder Dash* from German developer Kingsoft was another Amiga clone, with notable additions like bombs, dynamite and collapsible walls, although it blatantly copied other elements like the expanding ameoba and exploding enemies. It spawned several sequels, while co-designer Volker Wertich went on to create the far more original and hugely popular *Settlers* series.



» [Amiga] In *Rockford* our hero took on a number of guises including Explorer, Chef and Astronaut.

TREASURE HUNTERS

More videogame characters with a thirst for grabbing valuable trinkets and precious gems…





PITFALL HARRY

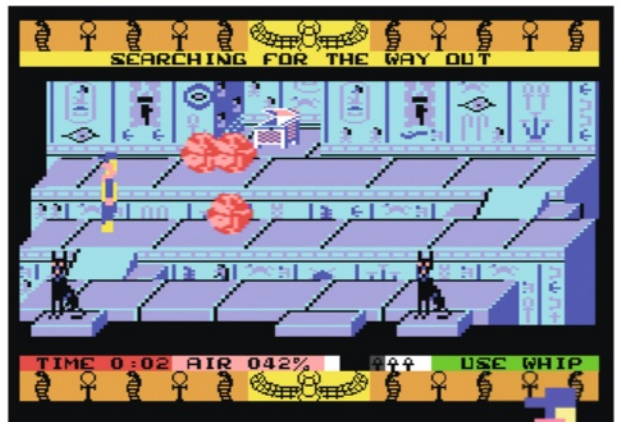
■ Despite walking funny, Harry was a dab-hand at jumping across crocodile-infested puddles, swinging on vines and leaping logs; useful skills for his role as one of the earliest virtual treasure-seekers. He also had a pet mountain lion, which makes him cool.

GUYBRUSH THREEPWOOD

■ Poor old Guybrush… unlucky in love, unlucky in treasure-huntery. In *Monkey Island 2* he was off to discover the mysterious prize of Big Whoop, but what followed was a tale so terrifying you'll never want to visit the circus with your kid sister again. Or something like that.









JIM THE CABIN BOY

■ The teen salty sea-dog attempted to plunder a ghostly pirate galleon in Firebird's budget arcade-adventure *Booty*. This boiled down to retrieving dozens of coloured keys to open holds while being accosted by phantom buccaneers and the captain's rampaging parrot.



SIR ARTHUR PENDRAGON

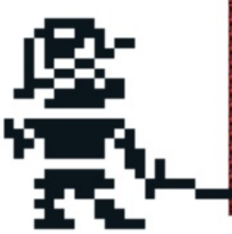
■ We're not sure if Ultimate's aristocrat adventurer was related to a legendary British king, but he certainly shared his thirst for mythical artefacts; most notably in *Entombed* where he was hunting for the mysterious Eye of Osiris and managed to get trapped in a pyramid.





SABREMAN

■ In *Sabre Wulf*, his first of several Spectrum adventures from Ultimate, our khaki-helmeted hero navigated a jungle fending off scorpions, snakes, spiders and the occasional Zulu. His goal was seeking out four pieces of a lost amulet before becoming Wulf-bait.





DIZZY

■ The prince of the Yolkfolk took a tropical vacation in *Treasure Island Dizzy*, but ended up trying to escape while grabbing plenty of gold coins. On the way he was expected to survive walking the plank, a scary haunted mine and snorkelling. No wonder he cracked.



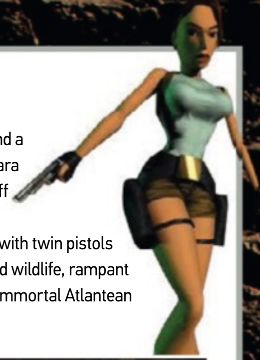


MAGIC KNIGHT

■ Mastertronic's endearing budget knight first appeared in *Finders Keepers*, where he was sent on an errand to collect birthday presents for a princess by his king. Being a clever subject he had a knack for trading and even worked out how to turn lead into gold along the way.



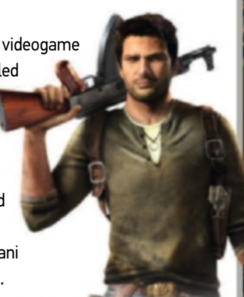
LARA CROFT



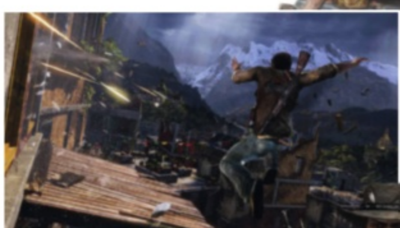
■ Like a moth to a flame and a Mancunian to a brewery, Lara always turned up at the sniff of any ancient relics. And luckily she came equipped with twin pistols to deal with any endangered wildlife, rampant Tyrannosaurus Rexes and immortal Atlantean gods that stood in her way.



NATHAN DRAKE



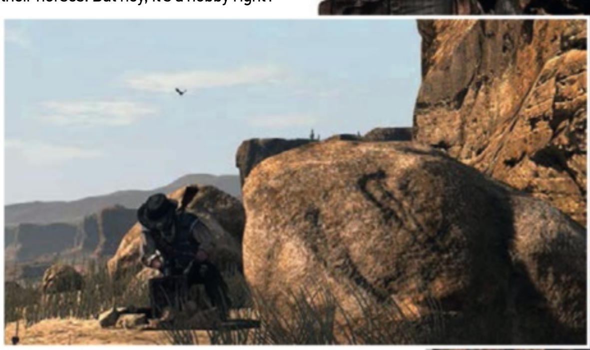
■ As well as being the only videogame character we can recall called Nathan, Drake inherited the title of best interactive adventurer not wearing brown hotpants after *Uncharted 2*, where he tried to locate Marco Polo's lost fleet and the fabled Cintamani Stone somewhere in Nepal.

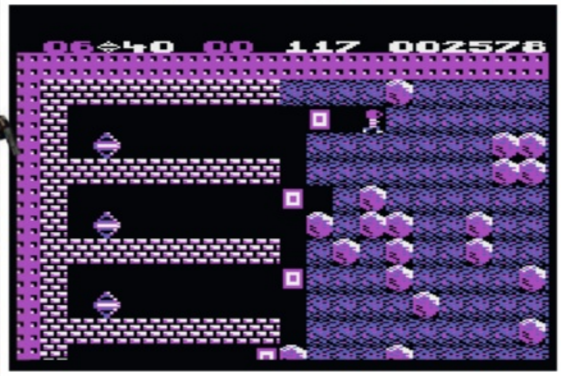


JOHN MARSTON

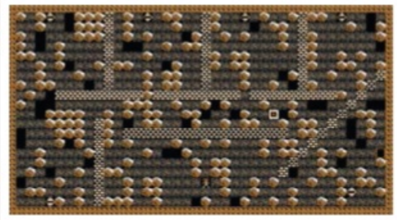


■ Square-jawed buckaroo Marston was a bit of an enigma in *Red Dead Redemption*. He spent a lot of time looking for curiously-shaped rocks and funny-looking trees when he really should have been capping bad guys and nicking their horses. But hey, it's a hobby right?





» [Atari 8-bit] Getting to these diamonds means Rockford must run a gauntlet of fireflies.



» [C64] In this cave players had to release fireflies and blast through walls by dropping boulders on them at just the right time…

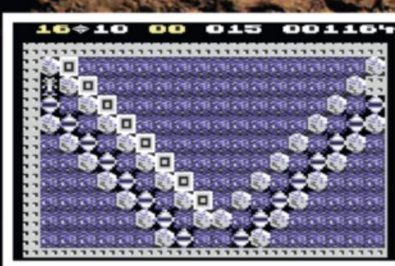
"You can always find traces of the original Rockford in every Boulder Dash"
Richard Spitalny

games developed with Data East were real arcade games. Data East also published the NES version in Japan, while JVC published the Game Boy and NES versions in North America, with Nintendo publishing those versions in Europe. *Rockford*, for Arcadia/Mastertronic, was the other arcade version of *Boulder Dash*. We developed the game on the Amiga and it too was housed in an arcade cabinet."

The two Data East arcade releases are particularly charming, especially *Boulder Dash Part 2*, which features cute Japanese-style graphics with Rockford wearing a mining hat, themed 'worlds' (Egyptian, Ice, Jungle) and even an appearance of the awesome 'Cave M' butterflies versus amoeba encounter from the original game. Many of these elements also made it into Data East's NES version, Beam Software's Game Boy release and Tecmo's Game Boy Advance title *Boulder Dash EX*, which sported an RPG-like storyline, cut-scenes and bunny-eared player characters. "As technology improved over the decades and graphics became more important, we did push to expand on the character throughout the series," says Richard. "Unfortunately the original Rockford, in the Atari and Commodore 64 versions, was so pixilated that it was difficult to transition that look moving forward. I would have preferred to retain the original look of the character throughout the decades, across all of the many sequels in a more uniform way… for example more like has been done with Pac-Man, but we were not able to do that. However in every game in the *Boulder Dash* series you will find that we pay homage to the original Rockford. Whether it be a red and white striped top, blinking eyes or a tapping foot, you can always find traces of the original Rockford in every *Boulder Dash*…"

As further instalments of *Boulder Dash* have continued to be released by First Star through the years, new game mechanics have also been introduced to keep the series fresh. Long-time fan and developer Sasa Skevin coded *Boulder Dash ME* (Mobile Edition) for mobile phones, and describes some of the additions he made for the 2002 release. "To modernise the game we added new tools to the game like the Magic Hammer to break boulders, the ability to kick boulders long distances to kill enemies, and bombs, as in *Bomberman*," he says. "We also included a 'rotation' feature where players can rotate a cave to create a totally new environment…" The rotation feature, first seen in *Boulder Dash EX*, was a particularly clever mechanic, with gravity affecting the boulders as players rotate the screen, opening up new pathways to grab those jewels. Other new gameplay features from recent titles include the ray-guns and dynamite of *Boulder Dash: Rocks!* and the telescopic arm of *Boulder Dash-XL*, a release that also includes a female character, a Rockford-ette called Crystal.

"It was my idea to include Crystal," says Richard. "We did that in *Boulder Dash – Treasure Pleasure* and *Boulder Dash – Pirate's Quest*, and in the leaderboards you could clearly see that a lot of players



» [C64] One of the increasingly tricky bonus intermission screens.

MORE FROM FIRST STAR

Richard Spitalny's company doesn't just make Boulder Dash games…

ASTRO CHASE



■ First Star's debut title was a frantic interstellar battle to save Earth, with the pilot of a saucer-shaped craft eliminating enemy spaceships and the creeping megamines that were targeting it. With impressive cut-scenes and colourful graphics, it was a fun if simplistic blaster with a nice use of simulated physics. A remake, *Astro Chase 3D*, was also released for the Mac in 1994.

BRISTLES



■ A light-hearted take on home DIY, *Bristles* starred an errant decorator on a mission to paint a series of houses while avoiding unlikely hazards (buckets on legs?) and riding elevators, all to a jaunty classical soundtrack. On the way players had to keep an eye out for Brenda the Brat, a teenage upstart who happily left handprints all over your hard work and messed up your paintbrush…

FLIP & FLOP



■ This isometric action game featured a pair of animal heroes, Flip the Kangaroo and Flop the Monkey, tasked with touching coloured tiles to complete each level while being chased by a zookeeper and his net. Players took turns to control each animal escapee, and while guiding Flip felt much like Q*bert as he hopped over the playfield, Flop was trickier as he hung perilously below it.

SPY VS SPY II: THE ISLAND CAPER



■ Generally considered the best of First Star's *Spy Vs Spy* trilogy, *The Island Caper* saw the comical agents from *MAD* magazine stranded in the Pacific, looking for plans for a top-secret missile. Like the first game it was great fun with two players, as you laid makeshift traps – palm-tree snares, spiked pits and coconut bombs – to outwit your opponent and escape in a friendly submarine.

SECURITY ALERT



■ This less well known First Star release was a clever concoction, the puzzle-action game equivalent of *Entrapment*. It put you in the shoes of a would-be cat burglar trying to rob a series of buildings while avoiding alarms, security cameras and robot guards. Starting with a jewellery store heist players worked up to the potential booty offered by a museum, bank and finally an embassy.



» [Xbox 360] *Boulder Dash-XL*'s 3D retro puzzle mode evokes the 'classic' look.

(we suspect female) were playing as Crystal. Women have always been a large part of the *Boulder Dash* fan base and I wanted them to be able to play as a female Rockford…" *Boulder Dash-XL* also includes a lovely little nod to Peter's originals in the form of a retro mode, which renders the 'classic' Rockford and *Boulder Dash* environments in glorious 3D. "With *Boulder Dash-XL*, the goal was to create a fresh new look while remaining true to the core gameplay and physics. We also wanted to emphasise the puzzle aspect of *Boulder Dash* so we created Puzzle Mode, where the caves are much more about mental gymnastics, while de-emphasising speed and hand-eye coordination. We also knew all along that we would include a retro mode. There's always a debate about whether or not to include the original caves…" For those pining for a true retro *Boulder Dash* experience, Sasa recently completed another dream project, *Boulder Dash – The Full Collection HD*, a compilation of the classic *Boulder Dash I* and *II*, with *Construction Kit* and both *ME* titles for Android. "We had to make game speed a bit less than it was on the original C64 to accommodate all devices," he says. "But the original *Boulder Dash* graphics, sound effects and caves are the most popular not only to us, but to many retro players. My favourite game element of the original was the randomness. Caves had so many different ways of completion. *Boulder Dash* was a game for players that had certain skills like mathematical thinking and fast-action puzzle solving."

First Star is even catering for retro hardware with the recent limited edition of an Atari 2600 *Boulder Dash*, with a planned Intellivision release on the way. And dozens of *Boulder Dash* releases and 30 years after Chris Gray's original inspiration, the company has another announcement to make, exclusively to readers of **Retro Gamer**. "I started up a company last year, Tapstar Games, focussed on mobile gaming, and thought I'd talk to Richard and see if there was any interest in doing something with *Boulder Dash*,'" Chris tells us. "The thing that has surprised me to this day is the fact that First Star has kept it alive, and it's a pleasure to think that people remember and enjoy the game and even feel sort of protective about it, so I can promise that we are being respectful but trying to make it feel very contemporary."

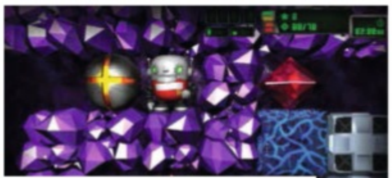
With Chris getting the ball rolling on a new *Boulder Dash*, the first he'd been directly involved in since the 1984 original, he decided it might be a nice idea to

> **"We've experimented with modernising the look, feel and physics"**
> Peter Liepa



» [PC] An underwater level in *Boulder Dash – Pirate's Quest*.





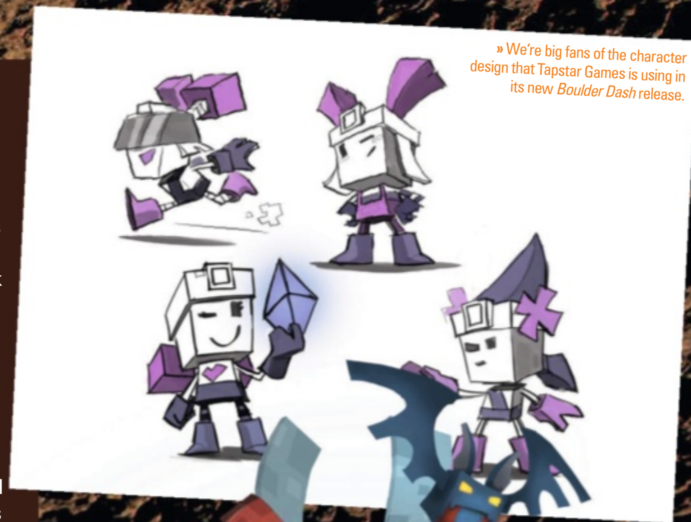
» [Xbox 360] *Boulder Dash-XL* features a mechanical Rockford with a telescopic grabbing arm.

involve someone else close to the project. "Peter was twice my age at that point and he had a firm idea what he wanted, and I don't think we always saw things the same way, but that's the way it worked out and I can't complain. It felt it would be nice to see if there was a way to get him involved, and it felt like a nice way to re-engage with each other after all these years. I figured there was an interesting dynamic to be had by working together again, and it's been fun to reunite the band, so to speak."

"It's great," enthuses Peter. "We've experimented with modernising the look and feel and physics. It's turned out that it's not so easy to change the physics without impinging on the playability of the game, so for the most part we've kept the rules of the old game, while adding new elements. On the other hand, we can use modern techniques to develop the look and sound while paying homage to the original, and the sky's the limit when it comes to cave size, animations, effects and compatibility with modern platforms."

"We are all very excited," beams Richard. "A 30th anniversary in this business is fairly rare, and I would say it's even more unusual for all of the original creators and publisher to be involved. We're targeting a first quarter 2014 release on iOS and Android, followed by PC, Mac and select gaming consoles. The sequel will include an editor so players will be able to create and share their own caves – the first time we've done this since the release of *Boulder Dash Construction Kit*. And while remaining true to the core gameplay we've included the ability to move diagonally in certain situations. This opens up new and exciting level design capabilities while creating a very new look to the caves. Hopefully, when looking at these pre-release screens, your readers will see our nod to the 8-bit era both in Rockford and his female counterpart Crystal, as well as the overall graphic style." We cheekily ask Chris what it's like to get to actually work on a *Boulder Dash* game to completion after all this time. Will he finally be getting to design some caves along with Peter? "Yes, and maybe we can have Liepa versus Gray or something just for fun!" he laughs. That sounds like a challenge to us!

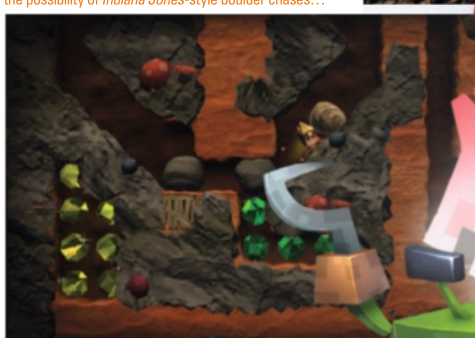
Thanks to Richard Spitalny, Chris Gray, Peter Liepa, Arno Weber of Arno's *Boulder Dash* Fansite, Tapstar Games and SoMa Play Inc for their help with compiling this feature article.



» We're big fans of the character design that Tapstar Games is using in its new *Boulder Dash* release.



» [iOS] The new *Boulder Dash* game will feature ramps and the possibility of *Indiana Jones*-style boulder chases…





» The new *Boulder Dash* game will be set in a number of interesting-looking locations.



» A selection of enemies and bosses you can expect to meet sometime in 2014. The Jade Dragon looks particularly nice.

UFO
ENEMY UNKNOWN

Almost 20 years after its initial release, UFO: Enemy Unknown remains one of the most challenging and influential strategy games ever released. Phil Locke chats to Julian Gollop, to try to get to know this enemy

You really shouldn't have taken that 48 per cent shot. At the core of *UFO: Enemy Unknown* are myriad interlocking systems, with the input on one affecting the output of many others. One single bad turn on a mission, one single hasty click, just one mistake and before you know it you're wondering whether you're a bigger threat to humanity's chances than the aliens.

If you lose a few too many soldiers on a mission, then you might need to withdraw from it completely, hoping that your squad can last out long enough to make it to the evac point. Lose everybody, and your Skyranger ship goes too. A replacement ship, which you absolutely need, costs $500,000 – and you'd much rather spend that money on some more scientists, essential for the research required to fully defeat the alien menace.

So you flee, losing a further soldier in the process. Astra Belov, let's call her – someone you've grown a particular attachment to, after you managed to save her alone from the massacre that was the first mission. This was her fourth mission – and she'd made Sergeant after two. Unlike the rest of your squad, you actually remember her name. You thought you were looking out for her. But, she's gone. And your remaining squad escapes. With aliens left unchecked to terrorise Leipzig, the German government looks like it's about to pull your funding. You really shouldn't have taken that 48 per cent shot…

UFO: Enemy Unknown is cerebral, not muscular – reflexes are unimportant, but an understanding of how to play within the systems is. "Well, I was playing lots of board games and card games as a child," says Julian Gollop, lead designer of *UFO: Enemy Unknown*. "I played chess, of course, then I progressed onto other board games and board war games from companies like SPI and Avalon Hill. Around age 11 or 12, I was making board games as well. When home computers came along, round about when I was 18 years old, I think I got my ZX81 then. I saw home computers as a medium, a platform for making the kind of games that I was interested in."

"This is kind of what I wanted to explore, what computers could do that board games couldn't… with computer games, particularly on the tactical combat side, we could have the idea of line of sight. Your soldiers ▶

» [PC] This is your base, out of which you are… based.



» [PC] Dealing with the alien threat naturally leads to some casualties.



» [PC] Managing the individual inventory of each soldier can be a pain.





IN THE KNOW

- » **PUBLISHER:** MICROPROSE
- » **DEVELOPER:** JULIAN & NICK GOLLOP/ MYTHOS GAMES
- » **RELEASED:** 1994
- » **PLATFORM:** PC, AMIGA, CD32, PLAYSTATION
- » **GENRE:** STRATEGY





» [PC] Don't let your scientists and engineers twiddle their thumbs – get them cracking on some weaponry.



» [PC] The intro is completely awesome, drawn like a Nineties comic book.

could only see what they could see! The map was revealed through what they could see, and they could only see enemies if there were no intervening obstacles. I did try to implement something like that in a board game before computers came along. It was quite cumbersome."

At first, *Enemy Unknown* started out as a sequel to *Laser Squad*. "We had a demo of something that we called *Laser Squad 2*, which was on the Atari ST," explains Julian. "It had some elements of what went into *UFO*. It had the 3D isometric graphics, where bullets could go up and down as well as left or right, so it had this sense of a real 3D world to it. It had destructible terrain, other stuff that was in *Laser Squad*, but the main innovation was the 3D isometric perspective."

With the rough demo in hand, Julian and Nick (his brother) now had to find a publisher. Right at the top of their list was Microprose, considered by the Gollop twins to be the best publisher in the business. Microprose was interested, and gave them an 18-month contract to produce a game, paying £3,000 per month between them. With Microprose on board, now the proof of concept had to be made into an actual game.

"Their biggest influence was right at the beginning. Actually, their only influence was right at the beginning, as within a few weeks of discussing it with them I had a fairly clear idea of how the game was going to work. Basically, their idea was to expand the game into something with more of a strategy element to it," continues Julian, on Microprose's early input. "What they basically wanted was something that could somehow match *Civilization* in terms of scope and ambition. A grand strategy game. Of course, what I had was a tactical two-player game. They wanted some kind of research tree, and something like the Civilopedia. What they were suggesting was very high level, with no details about how on earth it was going to be implemented!"

As with much of the project, the Gollops were mostly left to get on with it. When Julian produced his first design document, Microprose didn't really understand it. "I had to go to this meeting in Chipping Sodbury to explain in person how the game worked. Of course, I didn't have any other game to compare it to, because there wasn't any other game like it. It was a bit new to them… and… okay, in reality it wasn't really like *Civilization*."

Microprose did, however, have a hand in the theme and setting of the game. It felt that, following on from the success of *Civilization*, players would relate well to a game set on Earth. The first idea for the theme of *UFO* came from Peter Moreland, deputy publisher for Microprose. A fan of Gerry Anderson's TV series *UFO*, he suggested it as an idea to base the theme and setting of the game.

Julian watched a few episodes on VHS, and wasn't too impressed with it as a basis. "The only idea that was retained from that was the idea that you had this all-encompassing, worldwide organisation, that's responsible for somehow intercepting UFOs before they could do any damage. So, SHADO became XCOM. I found an alternative inspiration to Gerry Anderson's *UFO*, in a book called *Alien Liaison* by Timothy Good, which had this stuff about Area 51 and capturing and reverse-engineering UFOs. So, this idea of capturing the UFOs and their contents, and then researching it, reverse-engineering it, and then building your own new tech comes from that idea."

The complexity of *Enemy Unknown* is one of the main reasons it is still so revered, yet each of the systems is actually pretty simple.

> **"I had to go to this meeting to explain in person how the game worked"**
> Julian Gollop



DEVELOPER HIGHLIGHTS

LASER SQUAD
SYSTEM: VARIOUS
YEAR: 1988

RAIDERS
SYSTEM: ZX SPECTRUM
YEAR: 1984

LORDS OF CHAOS
(PICTURED)
SYSTEM: VARIOUS
YEAR: 1990

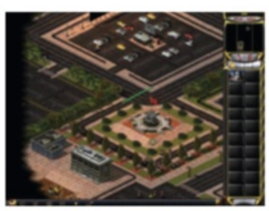
ARMCHAIR GENERALS
The five big guns in the world of real-time strategy



TOTAL WAR SERIES
■ Probably the biggest strategy titles around today, the *Total War* series is a must-play for any strategy fan – or indeed, anybody who fancies looking after 10,000 men. There's all sorts of mods too, for example the *Lord Of The Rings* mod for *Medieval II* that includes a recreation of Helms Deep.



COMPANY OF HEROES
■ This World War II RTS series is one of the most acclaimed of recent years, and shows off modern computers pretty well while being a challenging strategy game. The WW2 setting means that you get to recreate some historical battles, such as Operation Market Garden. Because that one went so well.



COMMAND & CONQUER
■ This classic series is one of the true greats. The *Red Alert* spin-off series is probably the most popular amongst fans. Even those who don't love strategy can find something to love here – probably the music. Whack *Hell March* on, and change history for the motherland.



DUNGEON KEEPER
■ Take control of your own dungeon, build a nice little torture chamber and slap your own minions around a bit. It's Peter Molyneux thinking his mad thoughts again, but this is one of the times he came up with an idea that really worked. A very silly game, but one that's well worth playing.



CIVILIZATION
■ By today's standards, *Sid Meier's Civilization* may seem clunky and obtuse. However, we should show it some respect. This certainly wasn't the first strategy game, but it remains a milestone of the genre. If the challenging UI doesn't bother you, perhaps you already play games by Paradox.

THE NUMBERS GAME

Why maths is quite helpful when playing UFO

Although it can be daunting, you really need to get to grips with the game systems in order to be able to actually do anything in *UFO*. This means having a head for figures. How many time units will you have to spend to get line of sight on that enemy? Will you actually have enough remaining to fire? Is it even worth fighting this mission? Your rookies are little better than useless at early levels, which makes it all the more heartbreaking when the one tough bugger who's been fortunate enough to stay alive gets wiped by an enemy lurking in the dark.

Furthermore, there's the routine maintenance of your base – keeping sure that you've got enough in your stores to replace lost equipment, making sure each soldier is equipped, right down to the precise amount of ammunition they carry, making sure that your resources all go to good use… there's an almost overwhelming amount of data to deal with. We asked Julian for tips, as most of the planet was threatening to abandon us. He could only say "Oh dear. You certainly need to get your research up and running pretty quickly. I guess I can't really help you anymore, I'm probably a bit crap at playing it myself!"

» [PC] A full squad, but how many of them will get back in one piece?



» [PC] End-of-month reports show you how badly you're doing.



» [PC] Even at point blank range, your rookies can't shoot straight…



Belov gets shot, she dies. Aliens attack Germany, Germany panics. You lose money, and therefore now have even less to spend on protecting what's left of the world. The next mission is even harder, and yet you still need to capture some alien technology to research. The complexities, and the fun, arise from the interactions between these individual systems, and from the unforeseen consequences.

"There's a lot of systemic stuff," admits Julian. "Although this is not revealed to the player, the aliens have certain levels of progress in their plan. Each region of the world has its own level. So, first level, they'd be sending out scouts, next level they'd be sending out abductors… basically, the aliens had to fly a certain amount of missions in order to progress to the next level. Of course, you could stop them progressing by shooting down their ships. All the player can see is that they are encountering new alien ships, and new alien enemies. Eventually the aliens get to a level where they send out ships to look for your bases, which can be very dangerous if your base gets attacked, of course. They will infiltrate the governments, and basically take over them. The alien's plan was inexorable – you could slow it down, but the only way you could ultimately stop it was to build your technology, go to Mars and destroy their big brain."

Despite the size of the game, and the fact that it was nearly three years in gestation, only Julian and Nick actually worked on it as designers and programmers, with two artists at Microprose. "It was a bit ridiculous – we should have basically hired more programmers, but of course Microprose weren't giving us any money to do that."

Furthermore, unbeknownst to Julian and Nick, the game was actually cancelled when Microprose was bought by Spectrum Holobyte. Pete Moreland decided to keep the project running anyway – "I guess it was just such a tiny cost to them. And then, only when Spectrum Holobyte were desperate for some product to ship within the financial quarter, did they ask Microprose UK: 'What have you got coming up that we can ship by the end of March?' The Microprose UK guys said: 'Well, you know that game you asked us to cancel… we've still got it.' Suddenly, our project became a high priority, right at the end, and myself and Nick were under a lot of pressure to actually get it finished before the end of March 1994."

This period of crunch was, Julian admits, light by today's "abusive" standards. However, it was a stressful time, made no easier by Microprose's penny pinching. "We practically had computer meltdowns, my computer was on its last legs. The fan kept stopping. We had to beg Microprose for a computer for Nick – they had to give him a reasonably powerful computer for doing the debugging in the final stages – which they did agree to, sort of. Initially, they said we had to bring our own equipment!"

In the crunch period they went to work in a closet at Chipping Sodbury for over two months. "We were there seven days a week, ten hours a day, working on the game, and yeah, we had to bring our own equipment," continues Julian. "They had a big virus attack, and accused us of bringing a virus! It turned out not to be us, but one of the other Microprose guys! We weren't exactly treated extremely welcomingly, I must admit!"

While Julian didn't work on the sequel, *Terror From The Deep* (which was made, he says, by about 15 people in twice the time the Gollops were offered to make it), he did go on to make further titles in the *XCOM/UFO* series. Would he attempt to make anything as complex again?

"I've always liked strategy games, because I believe that a good game may have relatively simple rules but have complex situations arising from them. Strategy games tend to do that very well, you know – even the simplest ones are very good at that. I think it's possible to have an accessible game which doesn't have amazingly complex rules, but still has a lot of emerging complexity within what happens – you know, what players do, what players explore. For me, that's the holy grail of game design. So, I don't think I would probably go back to making games as complex as *UFO*, but I think there's still a lot of stuff you can do, even with simple rules."

» [PC] The most worrying screen in the game, and possibly any game. The tension… the screams…





CLASSIC MOMENTS

Lylat Wars

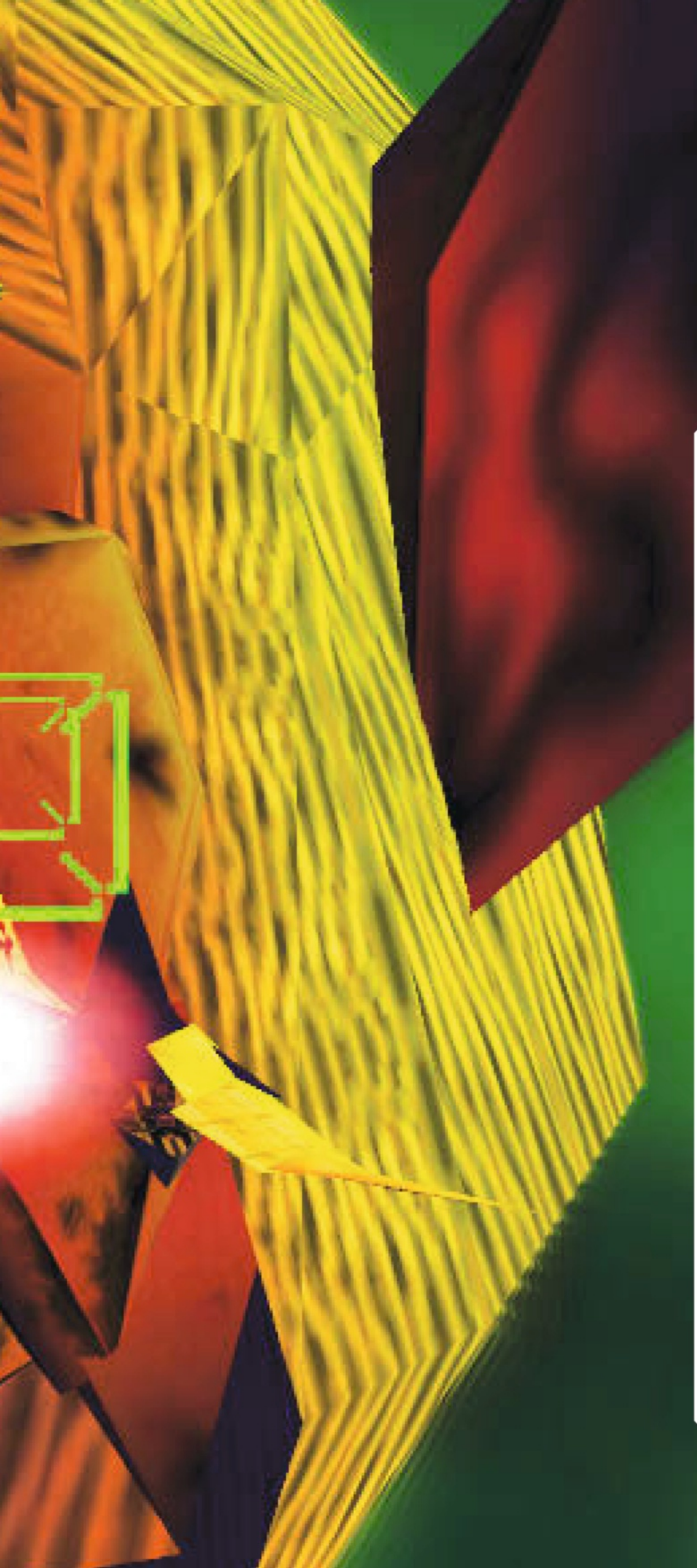
» **PLATFORM:** N64 » **DEVELOPER:** NINTENDO » **RELEASED:** 1997

The most iconic part of *Lylat Wars* outside of its main cast of anthropomorphic sci-fi heroes is surely the bizarre, but brilliant idea that the last boss is a floating gorilla head. The final scrap with Andross, which is certainly a step up in difficulty from any of the preceding levels, varies depending on which of the game's two branching narrative routes you take – the more difficult one ends with Andross transforming into his true form, a disgusting giant brain, and climaxes with you performing a daring *Return Of The Jedi*-style escape from danger.

But all routes end with an assault on this giant gorilla head, which is animated so expressively, and the scale of which is so impressive, even relative to the other gigantic boss battles earlier in *Lylat Wars*. It was a brilliantly surprising reward for your efforts that tonally matched the climax of *Star Fox* on SNES but made the most of the possibilities granted by the N64's 3D technology.

BIO

Known as *Star Fox 64* everywhere else but Europe – apparently due to a possible copyright dispute over the name 'StarVox' in Germany – according to developer Dylan Cuthbert, this sequel to *Star Fox* on SNES had a weird journey to completion. You probably know the story of *Star Fox 2*, the scrapped SNES sequel, which debuted the multi-route structure that eventually surfaced in *Lylat Wars* – some of the content made it into this N64 title, but the majority of *Star Fox 64* was original. Being skilful allowed the player to unlock new paths through the story; an undoubtedly forward-thinking idea in an energetic arcade shooter.



MORE CLASSIC LYLAT WARS MOMENTS

Another path



Lylat Wars leaves it to you to discover the different routes through levels offered by the story, and the first time that happens to you is pretty damn exciting – circumnavigating a few tight cliffs leads Falco to take you through a waterfall and fight a completely different end boss. This is when *Lylat Wars* starts to branch, letting players gradually peel off each strand of its vast galaxy.

Starwolf showdown



Players face Starwolf no matter which path they take. It's in this encounter, however, on the Death Star-like surface space station environment of Bolse, that *Lylat Wars* feels the most like a *Star Wars* movie. With surface cannons sending laser fire everywhere and swarms of enemy fighters, it's essentially structured like the Death Star battle: take out your rivals, blow the core and we'll go home.

Ground assault



A pleasing departure from Arwing-related combat is the opportunity to drive a landmaster during the Macbeth and Titania levels, putting you on ground level for some variety in combat dynamics as this moving armoured train throws boulders at you. Of course, Peppy and company still fly by Arwing, being the cowards they are (and it would be complicated to program ground AI for all four characters).

Solar



Level design is amazing in *Lylat Wars* – it's easily one of the most enjoyable space shooters outside of LucasArts' back-catalogue, with each level using the mechanics in a different way. In Solar, that's taken further by the fact your Arwing is constantly running down in health as you progress through this hot planet, meaning that you have to keep killing enemies or destroying rocks to survive.

ATARI XE GAMES SYSTEM



HYBRID HEAVEN?

The Atari XEGS is a machine with a real identity crisis – it's based on the popular Atari 8-bit range of computers but looks like a console. Kieren Hawken reveals the interesting story behind it…

In 1985 the worldwide videogame market was changing rapidly. In the US the Nintendo Entertainment System was about to take over a market in a slump. The North American videogame crash had decimated the home console market and let computers like the Apple II, Commodore 64 and Atari XL take centre stage. Over in Europe things were quite different; computers had always been at the forefront, but a significant thinning of the market had just taken place. Gone were computers like the Oric 1, Dragon 32 and Elan Enterprise. Systems that had enjoyed early success but soon faded into obscurity against the might of the Sinclair ZX Spectrum and Commodore 64. The Amstrad CPC was starting to sell very well and then there was the BBC Micro, fuelled by the educational market.

Atari's contribution was the Atari 8-bit series, machines that, while powerful, only enjoyed limited success in much of Europe due to their comparatively high prices. Despite this, it was the number two computer in Germany and was starting to enjoy success in the emerging eastern bloc nations like the Czech Republic and Poland.

Atari's consumer division had just been sold to Commodore founder Jack Tramiel and his newly set up Tramiel Technology Ltd. One of the first problems he faced was what to do with the vast inventory of stock he inherited. A large portion of this was made up by games and hardware from the Atari 8-bit computer range. So being the canny businessman that he was, Jack put a plan in place to re-launch what had become affectionately known as the A8 to go head-to-head with his own former creation, the Commodore 64, as well as newly arriving Japanese machines such as the NES and MSX. In fact, Jack himself cited that one of his key reasons for re-entering the industry was


ATARI XE VIDEO GAME CARTRIDGE
Lode Runner
ATARI





PERIPHERAL POWER

The add-ons every XEGS needs







XC-12 DATA RECORDER

■ In the UK games on tape were dominant, so it made perfect sense for Atari to allow games to be played from tape on the XEGS. Unfortunately the transfer speeds were incredibly slow and the loading of games was also very unreliable, despite that many of the budget publishers such as Codemasters, Mastertronic, Zeppelin, Hi-Tec and Alternative released a healthy supply of games on tape for the XE systems. The XC-12 also allowed you to save your BASIC programs to a blank tape too like other 8-bit systems of the time. It even came with a handy built-in tape counter.

XF-551 DISK DRIVE

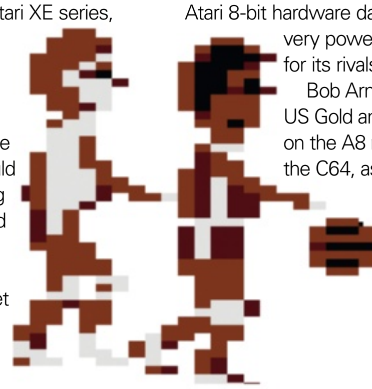
■ In its homeland of the USA the Atari 8-bit series had battled against the Apple II and Commodore 64 for many years and disks were the preferred format. Up until the release of the XE series though, Atari DOS didn't support double-sided or double-density disks. This all changed with the release of the XF-551 and the new XE DOS. Another change was that it also supported date stamping of files and sub-directories. DOS XE was incompatible with DOS 2.0 or DOS 2.5 and could only be used with XL and XE machines. A separate utility was needed for reading older 2.0 files.

XG-1 LIGHT GUN

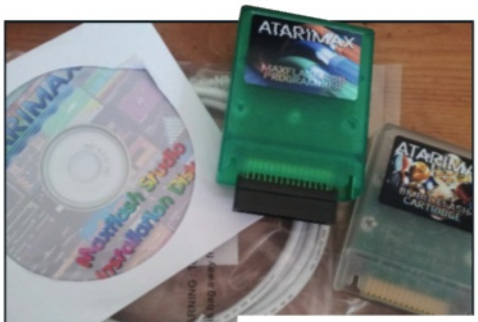
■ One of the key reasons for the NES's success was that it came bundled with the Zapper and the popular game *Duck Hunt*. So inevitably Atari came up with a lightgun of its own, the futuristically styled XG-1. Atari also made it compatible with all its current 8-bit machines, with lightgun games being released for the 2600, 7800 and XE systems. Although a reddish-orange version of the gun was planned for the 2600/7800 it never got a retail release, so the XE-branded gun was used with both. A total of seven games were released eventually.

to battle against the new Japanese invaders. He had once famously said in a Commodore press conference that "The Japanese are coming, so we must become the Japanese!"

This new product range was the Atari XE series, announced in early 1985 at the same time as the Atari ST. The XE stood for XL Expanded. At first it would come in two different flavours – the 65XE, containing 64k of RAM, and the 130XE, with 128k of RAM. They would both use a new sleek off-white casing that was similar to the one being used on the new 16-bit Atari ST computer. The following year Atari would also re-release the Atari 7800 and a budget version of the best-selling Atari VCS that would become known as the 2600 Jr. The new XE range would go head-to-head with the Commodore 64 while the 7800 would compete with the NES and the more-recently released Sega Master System. While the Atari 8-bit hardware dated back to 1979, it still remained very powerful and was more than a match for its rivals on both sides of the Atlantic.



Bob Armour worked as a programmer at US Gold and provides the following thoughts on the A8 range: "I preferred them over the C64, as they had a proper documented OS, rather than a kernel that was reverse-engineered by third parties. I actually used an Atari 800 to develop games for both Atari and Commodore machines because of this."



» The Atari Max cartridge is a great way to check out the latest demos and homebrews on real hardware.

By 1987 it was clear that Nintendo was taking over the North American videogames market and Atari needed to do something about it. The 2600 was selling well to the budget market and the ST was gathering sales at a rapid pace in the new high-end 16-bit computer category.

However, the two new XE machines hadn't been the success that Jack Tramiel and the board at Atari wanted. So the company took an unprecedented step by meeting up with the big high street retailers and asking them exactly what they wanted to see on their shelves. One of the key reasons the NES had managed to gain so much momentum in the US was that it has been marketed as a toy rather than a games console – the addition of ROB the robot and Zapper to the package had helped greatly with this. When American parents looked at the NES they saw more than just a games console. Of course many parents wanted a computer to help their children learn at home, even if the kids found a very different use for them! So these retailers told Atari that they wanted a games console with all the latest arcade titles to appeal to young people combined with a computer to appeal to the adults, therefore killing two birds with one stone.

Atari went away and got its thinking cap on, the result of which was the XE Games System. A console version of the 65XE that had ports to connect a tape player, disk drive, printer and of course a keyboard to upgrade it to a full-blown 8-bit computer. Unlike Atari's previous attempt to consolise the 8-bit line, the Atari 400-based 5200 Super System, the XEGS used the exact same cartridges as the home computers. And, thanks to the expansion ports, the wide range of A8 software available on disk and tape too.

The XE Games System, known as the XEGS for short, came in two different forms; the basic package came with the console, joystick, cables and built-in version of the Atari arcade game *Missile Command*. The deluxe edition enhanced the basic package by also including a lightgun, *Flight Simulator II* and *Bug Hunt* cartridges, and of course the keyboard to turn it into a fully-fledged computer. Both versions also had Atari BASIC contained in the ROM too – perfect for budding programmers.

The XEGS was positioned as Atari's high-end console offering, with the 2600 focusing on the budget market and the 7800 going head-on against the NES. This was an attempt to box in Nintendo from every angle by offering every possible alternative Atari could think of. Unlike the 5200 before it, the XEGS was released on both sides of the Atlantic. In the UK the XEGS was mainly sold through the big catalogues of the time like Great Universal and Littlewoods. This saw the deluxe package promoted as an all-in-one solution for parents; a serious computer for learning, as well as a red-hot arcade machine.

This strategy did see some limited success, with Atari UK's marketing manager Darryl Still commenting that "the XEGS sold steadily through the catalogues and provided a nice profit for Atari." Although it could use all existing software, Atari released 32 XE-branded games that would work without the need for a keyboard. A large amount of these were just re-packaged versions of existing 8-bit cartridge and disk games. They were packaged in striking blue boxes to stand them apart from the existing silver boxed games. As Atari was still sitting on a lot of inventory many of the older games could be found on shop shelves with big yellow "Also plays on XE Games System" stickers placed on them. In the last few years a number of finished but unreleased prototypes games have turned up that were intended for release as part of this range.

"I actually used an Atari 800 to develop games for both Atari and Commodore machines"
Bob Armour

The declining 8-bit market is cited as a reason for these games being unreleased according to internal documents that were also discovered. These titles include notable games such as a conversion of the Midway arcade game *Xenophobe*, the link up FPS-style game *Face Ball* (a conversion of the ST title *Midi Maze*) and the classic Capcom coin-op *Commando*.

Bob Armour worked on one such game, a conversion of the puzzle game *Deflektor*, telling us: "I can't remember the details on why it wasn't released. I can only guess that the market wasn't ▶

WOLF IN SHEEP'S CLOTHING

More home computers repackaged as consoles



COMMODORE 64GS

■ In 1990 Commodore decided to release a console version of its best-selling C64 computer in a hope to cash in on the now-booming UK console market. The ageing hardware looked vastly inferior next to its rivals and the machine quickly disappeared without a trace.



AMSTRAD GX4000

■ Released at a similar time as the C64GS, the GX4000 was a repackaged version of the new CPC+ computers. Despite its more advanced hardware the machine suffered a similar fate. Many of the games were barely enhanced from the original CPC versions.



ATARI 5200

■ The XEGS was not Atari's first attempt at releasing a console based on the 8-bit computer range. Dubbed as the "Super System", the 5200 was basically a console version of the Atari 400 computer that was most notable for its terrible non-centring analogue joysticks. The machine only saw a release in North America.



CBS COLECOVISION

■ Many people don't realise that the ColecoVision was in fact based on the MSX standard. The MSX was developed in Japan by Microsoft and positioned as an early 'PC standard' with machines made by different companies around the world. The only real difference between the machines was a slightly different sound chip.



COMMODORE AMIGA CD32

■ After the failure of the C64GS you would think that Commodore learned its lesson! But it tried again to repackage its Amiga hardware. After the failure of the Amiga CDTV multimedia system it hit back with the CD32, based on its Amiga 1200.



ESSENTIAL GAMES
Got an XEGS? Then you need these

TEMPEST XTREEM
■ Released in 2007 by Atlantis Games this homebrew release is without doubt one of the most impressive games for the machine. A conversion of the Jaguar game *Tempest 2000*, it even features a POKEY version of the iconic soundtrack! That is not all though; there is also digitised speech, an AI droid and 64 levels of intense action. Available on cartridge, there is also a free demo version of the game.



RESCUE ON FRACTALUS
■ One of the first games to be released by the now sadly defunct LucasArts, this title was revolutionary at the time for its use of fractals to display its pseudo-3D graphics. You fly a ship over an alien landscape trying to rescue the pilots from their crashed ships, but you need to watch out as you are not the only one out there! Atari itself repackaged the 1984 disk version onto a cartridge especially for the XE series.

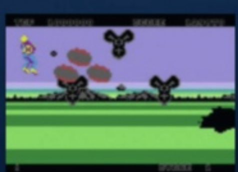


XENOPHOBE
■ This 1987 Bally/Midway coin-op has always been a favourite of ours. Based on the film *Aliens*, you control a marine on a mission to rid a series of space stations of their alien presence. Developed by Blue Sky Software, this superb XE version of the game went unreleased back in the day due to the declining Atari 8-bit market. Thankfully a fully complete prototype version was discovered and released on cartridge.

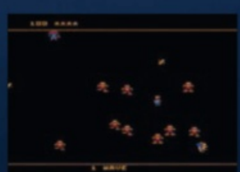




SPACE HARRIER
■ When Chris Hutt released this homebrew version of Sega's classic *Space Harrier* in 2011 he seemingly achieved the impossible. Cramming the 1985 super-scaler coin-op into what is essentially 1979 hardware is nothing short of incredible. He managed to include every stage, including the bonus levels that are missing from most home ports, as well as all the music, speech and even the legendary scaling effects! This conversion puts *Elite*'s 8-bit ports to shame.



ROBOTRON 2084
■ Although strictly not an Atari XE release, this conversion of Eugene Jarvis's sublime arcade game could be found on store shelves with a big "Also plays on XE systems" sticker on it in the late Eighties as Atari tried to clear its old inventory. A hugely impressive home translation, it is also one of the few that can be played with two joysticks. There is even a special holder available that you can slot two CX-40 joysticks into to replicate the original control panel.



STAR RAIDERS II
■ The original *Star Raiders* has often been called the A8's killer app, a game that really made people stand up and take notice. This sequel originally started life as a game based on the classic movie *The Last Starfighter*. After the film bombed in theatres, Atari let the licence expire, made some minor changes and released the game as a *Star Raiders* sequel instead. Although later converted to the Spectrum, C64 and Amstrad, the XE version is still the best of the bunch.





» The peripheral port catered for a number of different devices, making it pretty versatile.

deemed to be large enough anymore, or something like that."

For the average Joe on the street though, the XEGS was somewhat confusing. It wasn't a proper computer like the ST or Amiga, neither was it a games console with the latest arcade titles like the NES or Master System. This was, in effect, Atari's biggest problem; by trying to please everyone it satisfied nobody and left the public a bit bemused by the XEGS's existence.

Steve Wilds is the editor of *Atari User* magazine and founded the Atari 8-bit user group in Spain. He remembers the release of the XEGS very well. "Looking back, the release of the XE Games System was great news for Atari users at the time as we got to see a lot of classic games, plus some new ones, released on cartridge," he begins. "There was renewed support, for a time anyway, from retailers, Atari UK and from publishers." He also argues that Atari should shoulder much of the blame for the system's failure, rather than market confusion. "I believe the thinking behind it was to offer the best of both worlds – the convenience of a console with the power and flexibility of a home computer. That is what retailers claimed they wanted and that is what Atari delivered. It seemed to work – for a while at least – and Atari (as usual) let themselves down by not putting the financial commitment into marketing and retailer support."

Steve went on to wax lyrical about the machine's many advantages "If you wanted more than just a games machine then you could easily buy an Atari datacorder or disk drive. Remember, if you purchased a XE Games System you suddenly had access to a huge library of games on cartridge, disk or cassette."

Chuck Peavey was one of the most prolific programmers on the new machine, having worked on six games for the XE including conversions of *Lode Runner*, EA's *One-On-One* and Mastertronic's superb isometric shoot-'em-up *Panther*. He remembers being confused over the XEGS's place in the market himself.



» [Atari XEGS] Broderbund's original version of *Lode Runner* was updated for the XEGS by Chuck Peavey and uses the system's monochrome high-res mode.

"All of this was a huge mess," he begins. "People didn't know what system to buy, none of us knew what to write for, but we just kept going. Of course, the NES was a big hit and there was no way that Atari or Commodore could compete. At the time, everyone was milking their 8-bit systems. They felt that if they gave them more memory and used big words, people would keep buying them."

He spoke with us about the challenges of working with what was, at the time, essentially eight-year old hardware. "The Atari XE only had two four-colour sprites or four two-colour sprites that ran the full length of the screen. But it did have really good interrupts so you could move this stuff around," he continues, before using his own game, *Panther*, to provide an example. "You can actually see this if you look at *Panther*. The little spaceships you are supposed to shoot are done with sprites, but because you need to show a shadow to give the player the idea of how high above the ground the spaceship is, you need more sprites. We did this by creating an interrupt that redrew the sprites in shadow form below the spaceships. It was some tricky code."

"People didn't know what system to buy, none of us knew what to write for"
Chuck Peavey

Chuck really knew the hardware from his extensive time with it, revealing: "I think the ability to show 128 colours on the screen at the same time was amazing. No other machine at the time could do that. Even though I think the sprites on the Commodore 64 were better, I still like how the sprites work on the A8. It was also easy to do scrolling on the Atari because you could position the screen memory anywhere you wanted. In the game *Dark Chambers*, all of the bad guys are done with character graphics. The sprites were only used for the two heroes and the moving bullet. To get this many bad guys on the screen I had to do some crazy things with moving pointers to screen memory." He left us with some final thoughts on Atari's misunderstood console. "Anyway, a lot of people just didn't understand the XEGS. I think it sort of got skipped over. The only reason it got any game play at all (in my opinion) is that Atari spent money converting games to cartridge format. I think every cartridge game I ever saw for it was paid for by Atari." This last comment hinted at one of the XEGS's biggest problems as a console – it lacked the latest games. Many of its titles were repacked older titles or games already available on other machines. The cheap price of them did stand in the system's favour, as cartridges were half the price of their NES counterparts.

The XE Games System will never be remembered as fondly as the other machines in the Atari 8-bit range, but still as one with a very sexy design and some cool pastel buttons. It does however offer a great entry into the world of the A8 as it takes up less space than the computer iterations of the machine and can be easily upgraded. As well as being able to add on the various peripherals available, thanks to the wonders of modern technology you can now also add things such as huge RAM upgrades, internal flash drives and SD card loaders. This opens up a whole new world of demos and homebrews to the user, an area in which the system currently excels. The A8 range has one of the busiest and most impressive indie scenes around, with new games and demos seemingly being released on an almost weekly basis.

The machines have an incredibly hardcore following in Eastern Europe. This is partly down to Jack Tramiel's connections in this part of the world (he was Polish for those that don't know) and his wise decision to release a special low-cost version of the machine exclusively for those markets, the 800XE.

The XEGS is a quirky and interesting console that tried to please everyone, something that has continued to this day with the release of so-called 'multimedia machines'. If history proves one thing it's that you will never please everyone, but well done to Atari for listening to people and at least giving it a go.

Special thanks to: Chuck Peavey, Steve Wilds, Nick Harlow, Bob Armour, Darryl Still and Ketil Espenæs



» While the Atari XEGS's library is small, it does mean it's relatively easy to complete.

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Bomb Jack



The fizzing bombs may never actually detonate but Bomb Jack exploded into arcades regardless and left a lingering afterglow. Martyn Carroll looks back at the much-loved coin-op and its 30-year legacy



PIXEL PERFECT

The game features some fantastic cartoony graphics*



* Names may be made up…

Debuting in arcades in 1984, *Bomb Jack* was developed by Tehkan, the Japanese videogame company that would later change its name to the more familiar Tecmo. *Bomb Jack* was something of a departure for the firm, as most of its earlier titles were far more elaborate in execution. Its 1981 debut, *Pleiads*, was a multi-stage shooter in the style of *Phoenix*, while 1983's *Senjyo* utilised a smart 3D trick to simulate advancing alien ships. *Star Force*, released the following year, was a super-slick vertical shooter of some repute. So *Bomb Jack*, with its single-screen platforming antics, certainly wasn't pushing any boundaries.

Yet it has become a title that's instantly recognisable. At a time when new coin-ops were released at a rate of knots, and were often similar in style and appearance, *Bomb Jack* stood out in even the gloomiest arcades thanks to its colourful, cartoon sprites and brilliant backdrops. Anyone with a passing interest in gaming can easily identify the game, in particular the opening round with its iconic pyramid and sphinx background. It has become a classic videogame image.

There's also the audio. Jack zips along to various tunes (including, in a bizarre bit of music licensing, The Beatles' *Lady Madonna*), but it's the shrill sound effects that are most memorable. There are bleeps and chimes that are impossible to adequately communicate in print – no combination of ASCII characters can illustrate them. And who can forget the tense alarm sound that accompanies the occasional presence of the 'Power Ball' – a special pick-up that allows Jack to thwack enemies for a short amount of time.

The Power Ball is probably why the game is often likened to *Pac-Man*, as the two titles really have little else in common. Yes you can position yourself to lure enemies, and use platforms as barriers to block their movement, but in Bomb Jack you have much more freedom of movement and control over your character. Rapidly tapping the jump button to hover is a key skill, as is pulling down to descend more quickly or up to ascend higher.

Bomb Jack is also a high-score junkie's dream. Quickly gathering up all the bombs and moving onto the next round is fine, but to do it in style you must follow the ignition sequence and only collect bombs with sparking fuses ('firebombs'). On top of this, you need to build up the score multiplier by grabbing the bonus coins that appear on-screen. For such a 'simple' coin-op, the scoring system is really clever and one of the keys to the game's lasting appeal.

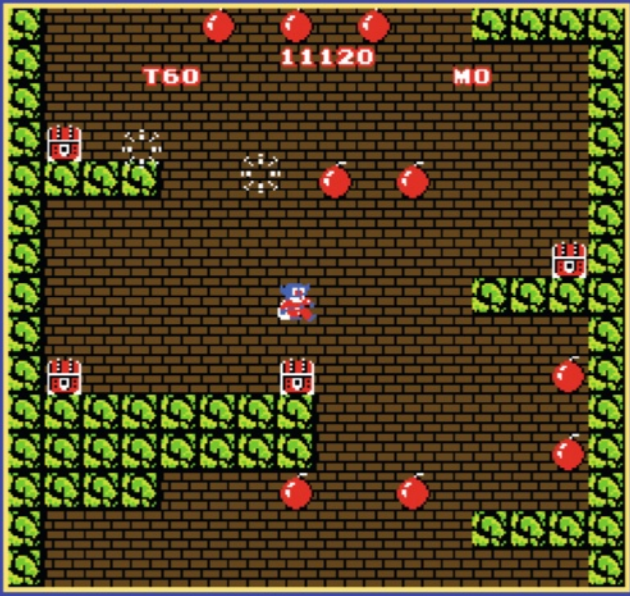
Of course, when we talk *Bomb Jack* we're not just contemplating the coin-op.



The game was converted to many home computers and consoles, officially in the Eighties and Nineties and more recently by homebrew teams who have ported the game to fill a gap in a system's software library. The small sprites and single-screen view made the game particularly suitable for conversion and the majority of home versions are admirably close to the arcade coin-op original.

One system that surprisingly didn't receive *Bomb Jack* was the Nintendo Famicom/NES, but that's because it got something more – or at least something different. Released in 1986, *Mighty Bomb Jack* is Tecmo's expansive, adventure-themed follow-up. There are static screens in which you simply need to collect all the bombs, just like in the original, but these are connected via scrolling sections where you plunder pick-ups from chests and explore secret rooms. Confusingly, this fun reworking was also adapted for Nintendo's arcade VS System, but its origins are on the Nintendo console.

Even more confusingly, UK-based Elite Systems, which converted the original *Bomb Jack* to home computers, released its own follow-up for the Commodore 64, Commodore 16, ZX Spectrum and Amstrad CPC in 1987. Simply titled *Bomb Jack II*, the game retained the original's single-screen approach and collect-'em-up objective, but unwisely fiddled with the gameplay. Jack could no longer fly freely around the screen; instead he could only leap from platform to platform. The initial full-price release included a copy of the original game as a bonus (or perhaps a peace offering). Elite had more success with its third *Bomb Jack* game, which was actually a conversion of *Mighty Bomb Jack* for the Commodore 64, Amiga, Atari ST and PC.



» [Arcade] *Mighty Bomb Jack* took place in a treasure-filled, bomb-packed pyramid.

Following these computer and console sequels, Jack made a belated return to the arcade in 1993 – and he wasn't alone. Developed by Nippon Microcomputer Kaihatsu (NMK), *Bomb Jack Twin* was a direct update to the original game that paired Jack with a red-caped partner (Jill?). Now, two players could work together to defuse all the bombs, while at the same time competing against each other to secure the highest score after each round. In addition there were more locations (you moved around a world map, like in *Pang*) and the speed of the game was ratcheted up a notch.

Bomb Jack Twin was never converted to home systems, although Elite planned to bring it to the Game Boy Advance in 2002 as part of a compilation called *Bomb Jack World*. The pack, which was to include *Bomb Jack* and *Mighty Bomb Jack* as well, sadly never materialised. Elite's Steve Wilcox has revealed that two of the three games were complete but the company "lost focus" on *Bomb Jack World* as its mobile phone business began to take off. Indeed, Elite did release the original game for mobiles in 2003.

Versions of *Bomb Jack* for sixth-generation consoles arrived shortly after. The game was included as part of *Tecmo Hit Parade*, a PlayStation 2 collection that featured six other Tehkan-era titles. It was released exclusively in Japan in 2004. The following year *Tecmo Classic Arcade* arrived on Xbox. Happily, this improved compilation, which featured *Bomb Jack* and ten additional arcade titles, was released outside of Japan.

Second-hand copies of *Tecmo Classic Arcade* can be picked up fairly cheaply and it plays perfectly on the Xbox 360 – ideal if you're looking for a quick 'blast' of *Bomb Jack* on a more modern system.

» [GBA] A glimpse of the unreleased *Mighty Bomb Jack* for the GBA.



TEHKAN THE ARCADE BY STORM

Bomb Jack was brilliant, but let's not forget about the firm's other classic coin-ops



Star Force (1984)

Known as *Mega Force* in some regions, this vertical shooter is so good that it almost belies its age, but it really was released in 1984. It's a relentless blaster that looks as good as it plays. It was later converted to several home systems including the NES and MSX.



Tehkan World Cup (1986)

Released to capitalise on the 1986 World Cup, this fantastic football game would be enjoyed long after the competition ended. It popularised the top-down viewpoint used in later football games and featured a trackball controller.



Solomon's Key (1986)

Created by Michitaka Tsuruta, *Solomon's Key* mixes puzzle and platforming elements. It's perhaps better known outside of the arcade thanks to the many home conversions, but the original remains one of the jewels in the company's crown.



Rygar (1986)

Not to be confused with Taito's *Rastan*. While they're similar games, *Rygar* is faster-paced and more fun. Our hero romps through mythical lands, carving up beasts with his spiky weapon. A belated 3D sequel was released for PS2 and Wii years later.



Silk Worm (1988)

A side-scrolling shooter with a neat gimmick. In co-op mode (which is the only way to play really), one player pilots a chopper while the other drives a jeep, working together to destroy enemy forces. Like a lot of Tecmo games, this was a hit in the arcades and at home.



Ninja Gaiden (1988)

Tecmo's most enduring franchise, which has graced many home systems over the years, actually began life in the arcades as a scrolling beat-'em-up. Overlooked but not forgotten – the coin-op version was included as an unlockable bonus in *Ninja Gaiden Black* on Xbox.

CONSUMER SEQUELS

Bomb Jack wasn't the only coin-op with sequels developed especially for home systems

Donkey Kong II (1983)



In the arcade *Donkey Kong* was followed by *Donkey Kong Jr.* Yet Game & Watch got both a version of that game and a numbered sequel in which Junior rescued Kong by unlocking four chains. With no sign of the moustachioed one, this was a real (monkey) barrel of fun.

Hunchback II: Quasimodo's Revenge (1985)



Ocean hit the jackpot with its first arcade licence and wasted little time in cranking out a sequel for 8-bit computers. It featured new screens, varied challenges and a punishing difficulty level. Further *Hunchback* games followed from Ocean.

Target; Renegade (1988)



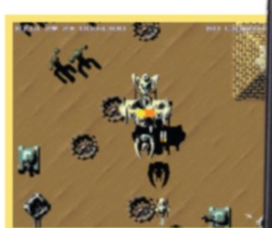
The Ocean boys were at it again with this home-only follow-up to Taito's street brawler. It introduced weapons, bigger areas and co-op play, and the result was easily better than most of the *Double Dragon* conversions. But don't mention *Renegade III*. Just don't go there.

Human Killing Machine (1989)



Before *Street Fighter II*, US Gold (who handled the *Street Fighter* computer conversions) pushed this as the follow-up. The same game engine was used, Ryu became Kwon and it was more of the same. US Gold also released its own *Strider* sequel in 1991.

SWIV (1991)



While not an official sequel, this shooter was clearly more than a spiritual successor to Tecmo's *Silk Worm*. *SWIV* (which stood for *Silk Worm IV*, amongst other things) retained the original's jeep and helicopter pairing but flipped the view to become a smart vertical shooter.

Frogger II: Threeedeep! (1984)



With a sub editor's nightmare of a subtitle, *Frogger* leapt from coin-ops to consoles and computers for the second game in the series. The perilous action now played out over multiple screens, and from this point on *Frogger* would enjoy a long career outside of the arcade.

Yie Ar Kung-Fu 2 (1985)



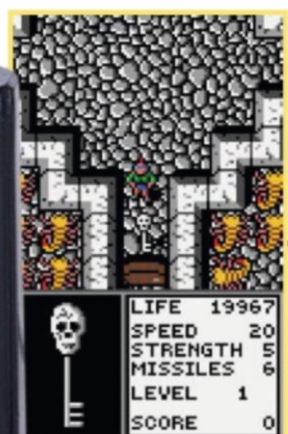
The classic fighting game never received a coin-op sequel, but the head-bashing continued unabated on the MSX. The sequel, which introduced new adversaries and, yes, flying ninja babies, was then ported to other home computers by Ocean for its Imagine label.

Space Harrier II (1989)



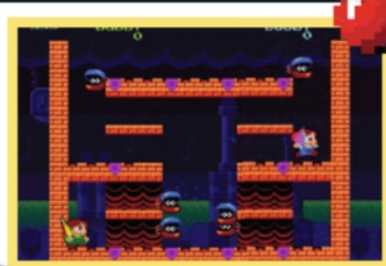
Forget *Planet Harriers*. The first *Space Harrier* sequel arrived on the Mega Drive as one of the console's launch titles. Sega released console sequels and updates to many of its most popular coin-ops including *OutRun*, *After Burner*, *Wonder Boy*, *Shinobi* and *Golden Axe*.

Gauntlet: The Third Encounter (1990)



Following the *Deeper Dungeons* expansion pack, this sequel to the first two *Gauntlet* arcade games was released for the Atari Lynx. In a (daft) departure from the original, new character classes included Nerd and Android! *Gauntlet III* and *IV* later appeared on home systems too.

Parasol Stars (1992)



The further, brolly-bashing adventures of Bub and Bob were developed by Taito for the PC Engine rather than arcades. Ocean then picked up the rights and converted the game to computers and consoles.



COIN-OP CONVERSIONS

How Jack fared when he made the jump to computers and consoles



ZX Spectrum

This is one of the most celebrated arcade conversions on the Speccy and it's not hard to see why. It features nicely detailed graphics, decent sound effects (the old beeper putting in a lively performance) and quick, responsive controls. It's basically as close to the coin-op as Speccy owners could genuinely expect. Perhaps the only problem is the backdrops which, while well drawn, are slightly too prominent, causing Jack and his enemies to sometimes get 'lost'. A minor issue though, and it certainly doesn't take the shine off this great game.



Atari XL/XE



Like the MSX-2 version, this homebrew release was reviewed in **Retro Gamer** (Issue 58) and awarded 90 per cent – a fair score for this impressive Atari 8-bit conversion. A quick glance at those chubby sprites reveals that this is based on the divisive Commodore 64. It's an improvement though, with extra space to manoeuvre and more responsive controls. The game requires a hefty 320Kb of RAM, so running it on real hardware may be tricky. But it's worth emulating to see how the C64 version could have turned out with some extra work.

MSX-2



Released in 2004 by the Kralizec team, this heady homebrew port was reviewed in an early issue of **Retro Gamer** (Issue 13, back issue fans) and awarded 90 per cent. The high score was definitely deserved as this is a sterling piece of work. The graphics and sound are authentic (the in-game music from the coin-op is carried over, unlike other home versions) and the gameplay is equally true to the original. If you discount the PS2/Xbox versions, which are arcade perfect, this is the best, most faithful *Bomb Jack* conversion available.



PC-8801

The NEC computer, obscure outside of Japan, was home to a surprisingly large videogame library that included a reasonable conversion of *Bomb Jack*. Graphically it has to be the most ghastly version ever released! The colours are garish beyond belief and to top it off, the platforms and borders are all rainbow-coloured. Character movement is a bit choppy and prone to flickering, but the game plays well enough. The PC-8801 featured a capable sound chip that's put to good use, rattling out some tap-along tunes.



SG-1000

The Master System never received a version of *Bomb Jack* yet the game did appear on the earlier Sega console, the SG-1000. And it's a fine attempt, courtesy of Sega itself, who obviously knew how to get the best out of the modest hardware. The character graphics are crude and the bombs look like boxed pumpkins, but the gameplay is fast, tight and admirably close to the coin-op original. Years later *Bomb Jack* was unofficially released for the MSX-1 and it was this version that was ported rather than any of the other Z80 releases.

Game Boy

Released in 1992, this version might have been late to the party but it was well worth the wait. The Game Boy was often burdened with overly-ambitious conversions, so it's pleasing to find that *Bomb Jack*'s single-screen play is a perfect fit for the Nintendo handheld. The graphics are crisp and show up well on the tiny display and the game zips along at a nice speed. The sound is great too, featuring a couple of compositions that play over the main menu and the Game Over screen. A top job all round.









Commodore 16

The C16 was often home to horrible coin-op ports, and in that dubious regard this doesn't disappoint. The graphics are messy, movement is jerky, sound is spasmodic – and that's being kind. Due to lack of memory, there are only two backdrops, and to view the second you have to load the other side of the tape! The real killer though is the difficulty level which is ridiculous. It's possible to get chomped by a bird within two seconds of starting a game. This is one platform where *Bomb Jack II* was better.



ST/Amiga

Arriving several years after Elite's 8-bit attempts, you'd expect the ST and Amiga versions to be pretty much arcade perfect. Visually they're not far off, but both suffer from sluggish and twitchy character movement. Being able to zoom smoothly around the screen is one of the coin-op's key assets but it's just not represented here and it really spoils things. There's a curious STOS/AMOS feel to the whole game. Both versions are more or less identical, which explains them being grouped together, although the sound on the Amiga sound is slightly better.

Amstrad CPC

No sign of a lazy Spectrum port here, thankfully. This dedicated CPC version is genuinely delightful – there's a copious amount of colour splashed around and plenty of authentic arcade sounds accompanying play (it's just a shame there's no option for in-game music). While colourful, the characters do lack detail. Jack's face, for example, is just a white blob, so some of the fun expressions seen in other versions are missing. Overall though, this is (just about) the best of Elite's *Bomb Jack* conversions for 8-bit computers.





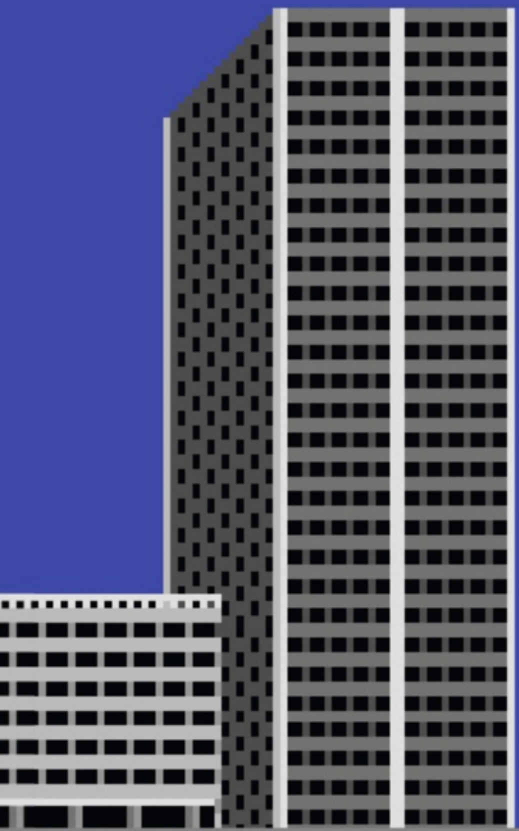
Commodore 64

The SID chip is given a good run-out here, with catchy tunes (care of Mark Cooksey) popping up at every opportunity. This is not to the detriment of other areas as this is a decent enough conversion featuring the fast, fluid gameplay of the original. But visually something is a little off, at least when compared to the coin-op. The sprites are too chunky so the action plays out in somewhat cramped conditions. On the upside this enhances the game's cute, cartoon feel. The C64 version is not poor or wrong, just different.

PS2/Xbox

The versions for the PlayStation 2 and Xbox are identical to each other so can be spoken about in the same breath. Both are included in Tecmo arcade compilations and are essentially arcade perfect – the emulation really is spot on. A few additional game options would have been welcome, as those that are included are just the coin-op's dip switch difficulty settings (you can alter the speed of the birds, the number of enemies and so on). Screen settings are limited to zooming in and out.





MONOCHROME MAKEOVER

How Alberto Gonzalez and Ricardo Fernandez ported Bomb Jack to the Game Boy

How did you land the *Bomb Jack* job initially?
Alberto Gonzalez: At the time our employers, New Frontier, were working very closely with the European publisher Infogrames. We did many 8-bit versions of its 16-bit games. Infogrames got the licence and entrusted the conversion to us.

Did you have access to the arcade version during development?
AG: Yes, they sent us the arcade board but we had no place to plug it in! So in the end we used the Spectrum version as a reference. We did have some input from Tecmo to polish it, mainly relating to the control of the character like pressing down on the pad while falling to fall faster.

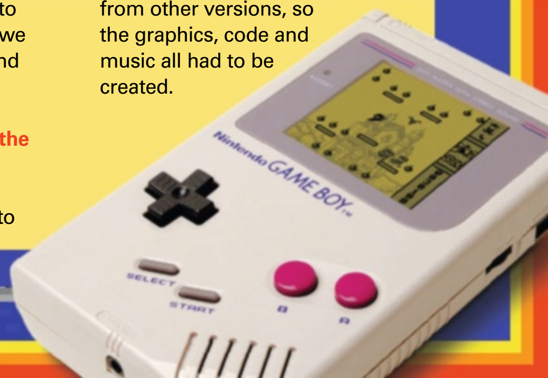
Tell us a little about the music.
AG: I composed and programmed all the sounds and music in the game. I didn't know much about the sound of original arcade so I composed new music, although for the in-game music I used the Atari ST version as a reference. There's a video of me on Facebook playing a prototype ROM with the very same Game Boy I used for composing the music (tinyurl.com/nle67p4).

Because the Game Boy screen was small, did you ever consider making the display scroll like Taito did with the Game Boy version of *Bubble Bobble*?
Ricardo Fernandez: No not really. For us it was very important to see all the action at once, so we immediately ruled out any kind of scroll.

How did you find coding for the Game Boy?
RF: It was not hard, it was actually pretty fun. I learned to program on the Spectrum and the assembler code is very similar between both machines so it wasn't hard to adapt. It took us approximately four months to finish the game. For a conversion of this kind you can't use too much from other versions, so the graphics, code and music all had to be created.

» Ricardo (left) coded the conversion while Alberto handled the audio.





THE UNCONVERTED

Arcade games that never made it home

KONAMI SPECIAL

SURPRISE ATTACK

■ **Developer:** Konami ■ **Year:** 1990 ■ **Genre:** Run-And-Gun

■ **It's fair to say that Konami's *Surprise Attack* owes a certain debt to Sega's 1987 run-and-shuriken *Shinobi*; specifically, it borrows its main mechanics – although you defuse time-bombs rather than rescue children in a sci-fi rather than martial arts plot.** That said the two games actually play very differently from one another. Unlike *Shinobi*, *Surprise Attack* tests your reflexes far more than your lateral thinking. It achieves this by staging its fire-fights in confined spaces and then fills those spaces with a dizzying number of trigger-happy opponents. This relentless onslaught cranks up the game's sense of urgency and jeopardy to the point that it makes *Shinobi*'s fewer, less aggressive antagonists seem sedate and methodical by comparison. In short, where *Shinobi* has you practice stealth, *Surprise Attack* has you rely on your instincts.

By way of concession, your character – Sergeant John Ryan – is faster and has better reactions than *Shinobi*'s Joe Musashi, and the Sergeant's space-age firearm is far more effective than Joe's iconic shuriken. *Surprise Attack* also offers a number of power-ups to level the playing field, with the most visually impressive one being unlocked by collecting a blue box that briefly gives you the power of flight and invulnerability while bathing you in lightning.

Surprise Attack also differs from *Shinobi* visually. While *Shinobi*'s sprites and backgrounds are well realised and nicely defined, *Surprise Attack* takes full advantage of its more advanced hardware to provide highly detailed and constantly varying pixel art as well as into-the-screen effects achieved through sprite-scaling. And of course, thematically, where Shinobi plays off a modern-day ninja riff *Surprise Attack* has a 'cowboys in space' vibe.

Given the two games' differences and that *Surprise Attack* improves on *Shinobi*'s graphics and effects, this leaves the question of why *Surprise Attack* didn't make it home? Well, the game does have unnecessary sci-fi quiz rounds, but these wouldn't have stopped it being ported. What seems more likely is that Konami felt *Surprise Attack* didn't fit the home market as well as it did the arcade scene. *Surprise Attack*'s two-dimensional space soldier and lack of storyline would certainly not have been best suited to the character-led console sector of the early Nineties. As a coin-op, though, *Surprise Attack* fulfils its remit perfectly.





CONVERTED ALTERNATIVE

SHINOBI 1987

As *Surprise Attack*'s clear inspiration, *Shinobi* is the obvious alternative to play at home. *Shinobi* was widely converted to consoles and home computers, but Sega's own Master System port is your best bet.



» Of the power-ups available in *Surprise Attack*, the most visually impressive is one that gives you the power of flight and invulnerability while bathing you in lightning.

» *Surprise Attack* tests your reflexes by staging its fire-fights in confined spaces and then filling those spaces with a dizzying number of trigger-happy opponents.

» *Surprise Attack* has you rely on your instincts. Your character – Sergeant John Ryan – has fast reactions and his space-age firearm is highly effective.

» Thematically, *Surprise Attack* has a 'cowboys in space' vibe. It boasts highly detailed, constantly varying pixel art and into-the-screen effects achieved through sprite-scaling.

BEST LEFT IN THE ARCADE

HOT CHASE

■ **Developer:** Konami ■ **Year:** 1988 ■ **Genre:** Racer



■ **Konami deserves some credit for the ambition it showed in developing *Hot Chase*; nobody could claim that there isn't enough going on in the game.** But that's also the cause of the title's main problem, as it produces slow and jerky on-screen action and the more the sprite-count is upped and the bigger and more animated those sprites become the greater the problem. Aside from the slow-down, the visual clutter in *Hot Chase* is confusing, and while armed guards and helicopters fit the game's plot the title's endless street furniture, rocks and cacti seem superfluous. *Hot Chase* also misses an opportunity, in that you have to avoid plenty of hostile vehicles – perhaps too many for a racing game – but you can't fight back. It's almost as if Konami was caught between two design briefs: a take on *Out Run* or a take on *Chase HQ*. Ultimately, it went for a design that didn't play to either game's core strengths, which left *Hot Chase* without *Out Run*'s speed-based exhilaration or *Chase HQ*'s vehicle-ramming thrills. This combination of unfocussed design, sprite-overload and slow-down would have made *Hot Chase* an extremely unlikely candidate for conversion.

PANDORA'S PALACE

■ **Developer:** Konami ■ **Year:** 1984 ■ **Genre:** Platformer



» [Arcade] *Pandora's Palace* features the colourful, accomplished sprite-art that defined Konami's mid-Eighties output.

■ ***Pandora's Palace* was jointly published by Konami and Interlogic and sold as a conversion kit for cabinets that supported the Konami Standard – a system that allowed arcade operators to swap a circuit board containing an aging game for a board housing a new one.** Konami billed *Pandora's Palace* as one of the most complete kits available and even included instructions that explained how to remove existing side art with a hairdryer! More importantly, *Pandora's Palace* delivers on gameplay and looks good while doing so.

Konami's platformer stars an ancient Roman – kitted out in toga and laurel wreath – in a series of tough single-screen stages featuring the colourful and accomplished sprite-art that would define the firm's mid-Eighties output. The objective is to get from the top-left to the bottom-right of each level, but appropriately themed hazards litter each screen so it's just as well that grapes provide a brief power-up in the form of centurions' armour. *Pandora's Palace* undoubtedly deserved to be converted, but perhaps was simply overlooked in favour of Konami's more bankable 1984 properties.

CONVERTED ALTERNATIVE

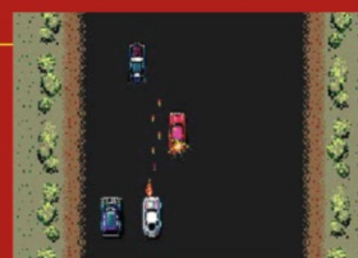
DONKEY KONG 1981



Donkey Kong ticks the single-screen platformer box, but just as importantly it matches *Pandora's Palace* for tough and compulsive gameplay. It was extensively ported, but both the ColecoVision and NES versions are great options.

CONVERTED ALTERNATIVE

SPY HUNTER 1983



Spy Hunter is an equivalent top-down scrolling racer with firearms that was brought home. It lacks *City Bomber*'s more advanced visual effects, but it plays similarly. The ZX Spectrum version is a decent port.

CITY BOMBER

■ **Developer:** Konami ■ **Year:** 1987 ■ **Genre:** Vehicular Combat



» [Arcade] The power-ups in *City Bomber* help you to pursue and bring down a criminal gang.

■ **Quite why Konami chose to give *City Bomber* the name it did is a bit of a mystery since the game doesn't involve a bomber or a bombing.** The actio does kick off in a city, though, so maybe 'Bomber' refers to the speed that you recklessly bomb through the title's first top-down level in your bright orange sports car.

Appropriately for a game that runs on the same hardware as the Konami classic *Gradius*, *City Bomber* offers the player a number of power-ups, which help you to pursue and bring down a criminal gang. These range from cool – missiles and rocket boosters – to crazy – wings and buzzsaws – but they all add to the fun. Each of the games' town and country stages include man-made and natural obstacles plus innocent drivers to avoid, although collisions with the latter costs time rather than lives. This is important, as you're against the clock in a chase from checkpoint to checkpoint. *City Bomber* also features some excellent sound effects and nice into-the-screen effects, and it may be that home versions didn't appear because of these and other advantages the coin-op hardware had.



JIM BAGLEY

In an astonishing career that has spanned over 25 years, veteran coder Jim Bagley has created ambitious and enthralling games across a range of formats. Retro Gamer popped up to the Wirral to find out more on the man and his games…

"FANCY A GAME OF POOL?" CHIRPS JIM 'THE HUSTLER' BAGLEY AS WE PUSH THROUGH THE DOUBLE DOORS OF HIS LOCAL PUB. "MAYBE LATER", WE SUGGEST, SO EAGER ARE WE TO CHAT RETRO WITH THIS UNASSUMING AND – WELL, DOWNRIGHT NICE – MAN FROM THE WIRRAL, WHO IS SPORTING A NASCENT MOUSTACHE IN AID OF MOVEMBER. **RETRO GAMER** RETURNS FROM THE BAR WITH A BRACE OF DRINKS AND SETTLES DOWN, EXCITED ABOUT THE PROSPECT OF CHATTING TO JIM, BUT TERRIFIED ABOUT HOW A 27-YEAR CAREER IS TO BE SQUEEZED INTO ONE SIX-PAGE FEATURE. STILL, EVER ONWARDS…

Hi Jim. We know you're a lover of games and retro games in particular – when did this begin?
When I was a kid I used to play in the arcades at New Brighton where they had all the classics of the time such as *Pac-Man* and *Space Invaders*. That was my first experience of games, and I loved it.

Is this where your desire to code began?
Actually, at the time I was a bit naive and I had no idea where you would go to make arcade games or any kind of games. But when I went to secondary school they had six Sharp MZ80k's and one BBC Micro – and everyone was playing games like *Chuckie Egg* and *Frak* on the BBC. The Sharps were sitting around not doing anything so I got the programming book that came with it and began to write. I'd analyse a program and see what lines were doing what and start changing them and was soon teaching myself quicker than they could teach me! Then, by the time I was 14 I'd begun writing in machine code on the BBC, and realising I was really enjoying computers at school my mum had bought me a ZX81. Then she got me a VIC-20 and I might have complained a bit [grins]. Eventually she saw sense and I was bought a Spectrum 48k. I'd already mastered 6502 on the Beeb so I thought it should be relatively simple to learn the Z80. I dabbled with BASIC but soon realised how much faster machine code was, so was soon making games after school every chance I could.

So this was 1983 and you'd already mastered machine code, but your first commercial game was some time away.
I was still at school and then sixth form. But I used to go to a local computer shop called Micro Byte in Liscard after school. I'd be talking to everyone in the shop and one day asked if anyone knew of any local computer companies, thinking they'd all be down south or in America. I didn't have a clue!

There were one or two in the north west…
Yes [laughs], and I got a phone number for one from them, phoned them up, had an interview and got a job! Just like that!

Where was that?
At Consult Computer Systems, a developer from Wirral. I'd left sixth form – it was doing my head in – as I'd stayed on to do computers but the only course that involved computers was business studies. It wasn't for me, I wanted to write games.

And the first game you worked on was *Throne Of Fire*…
Yes, with Mike Singleton! I was like 'oh my god' and felt the pressure straight away. Mike gave us the design and I was essentially the sole programmer on the game.



What did you think about writing this elaborate graphical arcade-adventure as your first game?
I wondered what I'd got myself into! One of the specs was that it was 129 rooms, and I thought 'why can't it be 128? That's a nice round computer-friendly number!' But at the time I didn't know why Mike Singleton was who he was – it was because he pushed boundaries. And it wasn't just that; the amount of sprites we had to do and cut their heads off so we could have different heads on them and then generate the masking for them in real time to save memory. It was a lot of hard work, but it taught me the value of stretching the technology to the limit. Mike was a great storyteller as well.

What did you think of *Throne Of Fire*?
It was okay, but lacking. I'd probably make it much better now, but I had to start somewhere. I wanted to make it faster, smoother and more fluid. But I couldn't because of the size of the sprites and the masks for the characters, all in real time. And all the characters were active constantly; even when they were off-screen they were being processed around the map. I was pleased with the achievement of it.

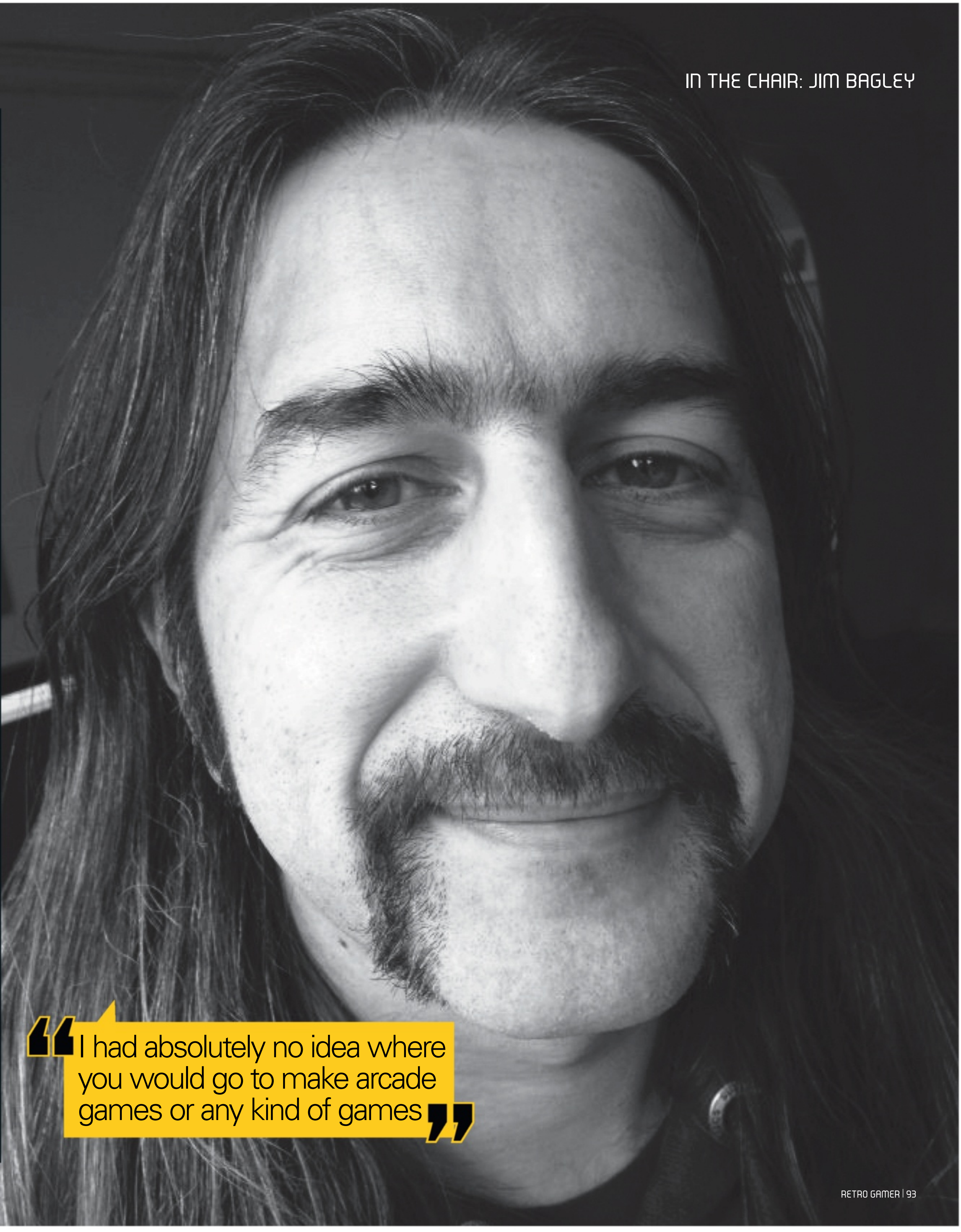
And then you left Consult?
Basically, I'd fallen out with one of the owners. It sounds silly, but he broke my bike. I didn't drive so had to go to work on a push bike. One day the weather was really bad so I got a taxi home and left the bike at work. He used it and broke it and then didn't repair it or buy a new one. But I wasn't happy anyway. I was working around the clock and not getting any overtime. I had the satisfaction of the game I was working on, but I felt they were taking the piss a bit.

So where next?
I was in Micro Byte again and was introduced to a guy named John Gibson. I started doing a utility for him and he was very impressed, so he took me into his office where he was one of the bosses: Canvas. I worked on my first arcade conversion there, which was *Road Runner*, converting it to the Speccy. I didn't know the first thing about converting an arcade game and here I was the sole programmer for a big conversion.

It received a muted reception…
I messed up the collision detection a bit which I was a bit gutted about. But the game was as close as I could get at the time to the arcade version.

Despite the reception of these two games, they sold well. How did you feel seeing your games on the shelves?
It was great and it's one of the things I miss at the moment with the iOS stuff. It was one of the big buzzes of making the games back then.

The big name on your CV for Canvas is *World Class Leaderboard* from 1987.
It was a game that John had been working on before he left to go and join Microprose. I was dropped with finishing the game quickly and had to remove as many bugs as I could in the time. And as it was written in 6502, tracking the bugs was a real pain



> "I had absolutely no idea where you would go to make arcade games or any kind of games"



SELECTED TIMELINE

- **THRONE OF FIRE** [ZX SPECTRUM] 1987
- **ROAD RUNNER** [ZX SPECTRUM] 1987
- **STREET SPORTS BASKETBALL** [ZX SPECTRUM] 1987
- **WORLD CLASS LEADERBOARD** [ZX SPECTRUM] 1987
- **GUTZ** [ZX SPECTRUM] 1988
- **BATMAN: THE CAPED CRUSADER** [AMSTRAD] 1988
- **RED HEAT** [VARIOUS] 1989
- **CABAL** [VARIOUS] 1989
- **MIDNIGHT RESISTANCE** [VARIOUS] 1990
- **HUDSON HAWK** [VARIOUS] 1991
- **ULTIMATE SOCCER** [VARIOUS] 1993
- **DEFENDER/JOUST** [GAME BOY] 1995
- **STRIKER** [MEGA DRIVE] 1995
- **DOOM** [SATURN] 1996
- **ELIMINATOR** [PLAYSTATION] 1998
- **TOMMI MAKINEN RALLY** [PLAYSTATION] 1998
- **PREMIER LEAGUE STARS** [PLAYSTATION] 1999
- **SUPREME SNOWBOARDING** [GAME BOY COLOR] 1999
- **TJ LEVIN'S ULTIMATE BMX** [GAME BOY COLOR] 2000
- **TECH DECK SKATEBOARDING** [GAME BOY COLOR] 2000
- **TINY TOONS: BUSTER SAVES THE DAY** [GAME BOY COLOR] 2001
- **NANCY DREW MESSAGE IN A HAUNTED MANSION** [GBA] 2001
- **IK+** [GBA] 2002
- **SUPER DROPZONE** [GBA] 2002
- **WORLD TENNIS STARS** [PLAYSTATION] 2002
- **ANIMAL SNAP** [PLAYSTATION] 2002
- **STRIKE FORCE HYDRA** [PLAYSTATION] 2003
- **WARDEVIL (UNRELEASED)** [GAMECUBE] 2005-2010
- **i3** [iOS] 2011
- **SLOTZ RACING HD** [iOS] 2013
- **JB RACING** [ZX81] 2013
- **APPLE BOB** [iOS] 2013

in the [the song *Rio* by Duran Duran conveniently drowns out Jim at this point].

Did things change for you personally at Canvas when John left?
Lots of people were leaving to go elsewhere and I wasn't particularly happy with the dynamic there. Dawn [Drake] had already gone to Ocean, and she got me an interview with Special FX in Liverpool as I didn't particularly want to move to Manchester.

How were things different at Special FX, if at all?
It was more professional. Finny (Paul Finnegan, co-founder along with Jonathan 'Joffa' Smith) was an excellent salesman and a good boss. The office was at the Albert Dock in Liverpool and it was nice and open-plan. I was with Joffa and Chas Davies who did the graphics for my games. I remember we were next to the Granada TV News studios and Fred Talbot's weather island was just around the corner.

> "It sounds silly, but he broke my bike"

And the first game you did for them was an original title called…
Gutz. It had already been designed and basically the story is an alien has come to eat the planet and you had to go inside it and blow it to bits. And for *Gutz*, Joffa showed me his push-scroll to get fast scrolling on the Speccy.

Was working on *Gutz* refreshing after doing all the conversions?
It was nice to have the freedom to put in little touches even though you're basically running around a maze, shooting baddies and getting to the exit. Usually people ask me about doing a sequel…

Oh, sorry Jim, how about a sequel, *Gutz 2*?
I'm too busy at the moment… but never say never!

Having done this original game, it was back to the arcade conversions right?
Yep, and the Amstrad CPC version of *Batman: The Caped Crusader*.

Amstrad conversions didn't tend to have the best of reputations…
I wasn't happy with the way previous conversions had been through history, usually through lack of time. I intend one day to do a proper full-colour Amstrad version of *Midnight Resistance* or *Cabal*…

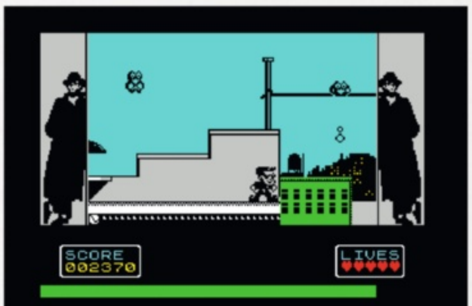
Before those two you finally got to work on one of Ocean's movie licences, *Red Heat*, the Spectrum version of which strangely only incorporated the top half of the characters.
We wanted big sprites for that game, and if we had done the legs as well they'd have had to have been thin and obviously the character Arnold Schwarzenegger played was not thin. As usual, we just had the script to go on, but we knew what Arnie looked like!

Next up was a brace of perhaps your most famous and technically impressive 8-bit games.
The difference back then between arcade machines and home computers, especially the Spectrum, was immense. *Cabal* and *Midnight Resistance* were my pinnacle of arcade conversions.

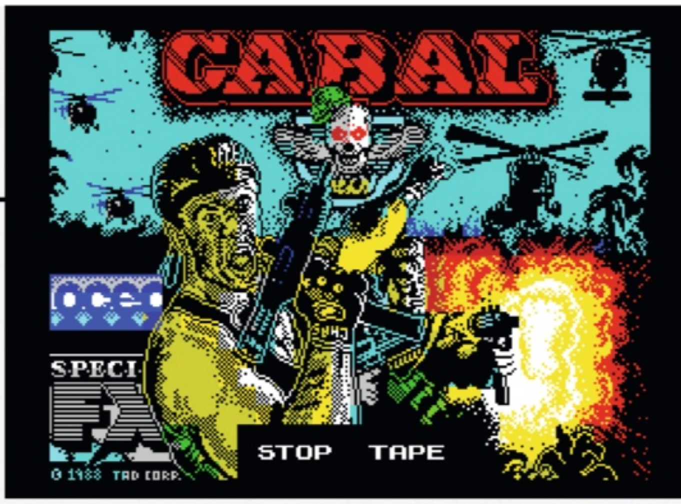
Taking *Cabal* first, the thing that strikes you about the Spectrum version was the colours and relative lack of attribute clash. How did you achieve that?
It was using clever boundaries. Anything that had colour, the enemies went behind. So they'd go behind the buildings, you'd shoot the buildings and they'd crumble away, leaving the sprites. Therefore the sprites would hardly ever go through two changes of colour. Also, the arcade game had shedloads of baddies on-screen and I felt it was important to replicate that as much as possible and get the same feel of mass destruction – and keep it moving as quickly as possible, which took a lot of code optimisation.

It always seemed to be an impossible task…
With the likes of *Midnight Resistance* it seemed like that to me too. It was an absolutely *massive* game; lots of levels, colourful graphics and varied maps. It was a great challenge figuring the best way of getting as much of the original into 48k, and I guess it was my competitive side as well, wanting to achieve as best as possible.

But by now you must have realised the Spectrum's time was coming to an end?
It was actually during the development of *Cabal* and



» [Spectrum] Hardly a natural movie for a videogame: *Hudson Hawk*.



»[Spectrum] The action-packed loading screen for *Cabal*. Play it people.

Red Heat that I got an Atari ST and started learning to program on that. I knew you needed to keep up with the flow of the industry. The map editor for *Midnight Resistance* I did on an ST, and I think *Cabal* as well.

Your final game for Special FX was *Hudson Hawk*, which you coded on Z80, including the Game Boy. Had you seen the film?
Nope. At the time everyone said it was rubbish and it was a big flop. I bought it in HMV a couple of years ago and knew it was going to be cheesy from the script, but I actually enjoyed it. I thought the timings of the tunes was quite clever!

Didn't you look at the script and think it didn't really lend itself to a videogame?
It was basically 'here's the script, go make the game and do it in three months!' So we all read it and worked out what locations we were going to set the levels in and go from there. We thought about what kind of baddies, such as a guard dog on the roof in the first level and the shitting birds above…

Don't remember that in the movie…
They were dropping eggs, honestly! But as we didn't have any visuals, we could improvise a few things such as the baby on the bike and nuns pushing wheelbarrows. Maybe a bit of Joffa's influence there! But I actually enjoyed working on *Hudson Hawk* because I liked working on the Game Boy, which was a port of the Speccy version. The Game Boy's processor was sort of a cut-down version of the Z80, so much of the code was similar and it was just a case of changing bits and pieces. And there were a couple of handy instructions, like you could store a byte in a pointer and increment the pointer as well, which you couldn't do on the Spectrum. Plus hardware sprites – that was nice!

Then you began working at Rage, which was also founded by Paul – what happened?
I think Ocean, for whatever reason, decided to get rid of some of its external studios in 1992. We all got laid off, and some of the others clubbed together to start up again. I wasn't in that group although I was only unemployed for around a fortnight!

Didn't you want to be involved at a higher level?
I was still naive; I just enjoyed what I was doing and wasn't interested in the business side of things and I was still coding all the time after work. Whenever I got hold of some new hardware, my aim was always to get something on the screen; if I could do that then I could do anything. [As the strains of Primal Scream's *Burning Wheel* hover above us, Jim boots up his laptop and demonstrates to **Retro Gamer** a selection of his homebrew Game Boy games; they look impressively cool and retro.] ▶

FIVE TO PLAY

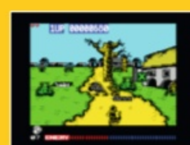
Jim's been involved in a large number of games, but these are our favourites

MIDNIGHT RESISTANCE



■ Despite minor criticism of it being just 'a *Contra* clone', Data East's *Midnight Resistance* (which was actually a sequel to the game *Heavy Barrel*) was a moderate hit when it was released in 1989 and popular with arcade gamers who had been brought up on run-and-gunners such as *Commando* and *Ikari Warriors*. With one or two players, the aim was to rescue the other members of your family from the clutches of the evil King Crimson, who naturally had a horde of soldiers and tanks at his disposal. In addition to multiple-direction scrolling, colourful sprites and explosions over a multitude of varied terrains, the game encouraged players to collect tokens from vanquished enemies that could then be used to purchase upgrades and extra lives at the end of each level. Jim Bagley and Special FX did a remarkably accurate job of translating this complex arcade machine onto the ZX Spectrum with virtually all of the levels intact. Only the lack of two-player mode and the obvious graphical and sonic restraints deter, although the pace and playability of the game is almost totally intact. A remarkable achievement.

CABAL



■ Having already translated *Road Runner* to the Spectrum with mixed success, Jim's first conversion for Special FX was this coin-op from Taito. Compared upon release (like *Midnight Resistance*) to scrolling run-and-gunners such as *Commando* and *Ikari Warriors*, *Cabal* saw the player unable to move from the base of the screen as an army of enemies attacked from 'above'. With the original cab utilising a track-ball, the aim was to clear the enemies whilst dodging fire and hiding behind obstacles. Jim's main idea with the Spectrum version was to maintain the original's gameplay while emulating the colourful graphics as much as possible. The result was an outstanding arcade port for the machine and one of Jim's proudest moments.

THRONE OF FIRE



■ For his first commercial game at Consult, Jim was introduced to the legendary (and sadly late) Mike Singleton, author of the ground-breaking *Lords Of Midnight*. Despite his coding background, Singleton provided the template and backstory for *Throne Of Fire*, itself an expansive tale of warring princes fighting for control of the eponymous royal seat. With a two-player option, large sprites and constantly moving characters that could be tracked off-screen, *Throne Of Fire* was a challenging task for any coder, let alone a freshman like Jim. Learning tricks and tweaks on the fly, his experience on the game taught the young man many lessons on pushing the boundaries of technology that he would take throughout his career.

STRIKER



■ By 1995, when Striker finally made it to the Sega Mega Drive, the console had already experienced two incarnations of the behemoth that would become *FIFA Soccer*. This game, first released on the Commodore Amiga and Atari ST in 1992, was delayed due to the reluctance of Sega to use the name, which saw Rage work first on *Ultimate Soccer* (for which Jim Bagley contributed a neat menu system on the Mega Drive) before finally releasing *Striker* as the era of the Mega Drive began to wane. Boasting a novel 3D viewpoint which could be rotated in-game, *Striker* was an altogether more simple game of footie than the *FIFA* series had already become and represented yet another impressive technological feat from Jim.

APPLE BOB



■ As with many, iOS and mobile phone development is a natural home for a coder used to working on his own such as Jim. His second mobile game, *Apple Bob* (once known as Apple Dash) was conceived 18 years ago as he sought to expand his skills in his own time, coding an arcade-style platform game that revolved around collecting apples and dodging bees. Together with Paul Vera-Broadbent, the new version, reskinned and fine-tuned for touchscreen controls now sees Dash up against 'gloopers', pink blobs who have kidnapped the queen bee. It's a fun game capturing the spirit of Eighties arcade titles.



YOU ASK THE QUESTIONS

We gave the readers of Retro Gamer the chance to test Jim's memory. Head over to www.retrogamer.net/forum to get involved

MARKOPOLOMAN: Did you ever program on the C64?

Yes, and I had one at home but at Special FX there were two C64 coders already so I just did it because I liked a challenge and wanted to know how to code the C64.

PARANOID MARVIN: *Hudson Hawk* and *Red Heat* were not the two greatest movies and neither particularly easy to transfer into a game. Were you annoyed you didn't get a better licence?

[laughs] Yeah, they were both flops. At the time we used to say that we were given the games that Ocean's in-house team didn't want, usually the awkward or flop films.

MERMAN: What would have been your dream licence or arcade game to turn into an 8-bit game?

That's a good question because there are so many classics in the arcades that I enjoyed such as *Defender*, *Gorf*, *Spy Hunter*… the list is endless. But to be fair, *Cabal* and *Midnight Resistance* were also great arcade games.

MRSPUD: When are you going to finish the Spectrum *Double Dragon* remake?

As soon as I get some free time! But it's very high up on my to-do list, so be patient, I haven't forgotten about it.

SSCOTT: Do you still play games today?

Of course! I mainly play retro games and I've been teaching my girls what real games were all about. I play the odd new game to keep up with things, but I much prefer the games of old.



» [Spectrum] Hitching a ride in the opening to *Midnight Resistance*.

Moving on to your first game at Rage, and as you're not much of a sports fan, you presumably weren't particularly excited to be coding *Ultimate Soccer*?

Not overly… but it was work. It was going to be called *Striker*, but Sega, who I think were behind it, decided it should be called *Ultimate Soccer*. And then we ended up doing another football game called *Striker* on the Mega Drive anyway. But with *Ultimate Soccer* I just did the menus and the music driver, although I was sole programmer on the Master System and Game Gear versions, which had a different viewpoint from the Mega Drive game because they couldn't handle the 3D graphics. Fortunately they were now a full Z80, so it was great for me to adapt to.

And then finally you got to work on a Mega Drive game in *Striker* a couple of years later?

I started from scratch on that. It was a port of the ST version from three years earlier, but I knew I could get it looking much better. I wanted it to look like textures rather than just flat colours; you could also choose between side-on and 3D views, in real time as well. I also did a version for Sega's 32X, which was textured, had goal-scaling and digitised pictures. It looked fantastic, but the 32X died before we got a chance to finish it.

And then it was straight onto the Sega Saturn with a conversion of a little-known three-year-old PC game…

Haha… yes we were always playing multiplayer *Doom* at lunchtime or after work and one day Finny came up to me and said 'you like playing *Doom*, don't you? Do you wanna write a version of it?' Turns out he already had the rights to the Saturn version.

How was coding on the Saturn?

It was a 3D machine in theory, but its major fault was a bug in the hardware. If you used a transparent or semi-transparent pixel it would take six times longer for it to draw than it would a standard pixel. Again, I liked the challenge. It was a great project, trying to get it full speed and with a full screen as well.

After *Doom* you left Rage?

I wasn't overly happy with the way they were going. I felt they were getting too big and I always said to Paul, don't get too big because if you get one big flop it can take you down. Two friends of mine from school who had helped me with the *Road Runner* graphics while I was at Canvas had joined a company called Magenta Software, so I joined them. My first task was to write the render engine for a *WipEout*-type game called *Eliminator* [at this point Jim's phone rings. He proudly tells the caller he's being interviewed for **Retro Gamer** before hanging up]. We didn't stay there long as the three of us went to form Strange Productions where we first worked on on *Tommi Makinen Rally* for Europress. We were only supposed to be cleaning up the PlayStation version, but had soon taken on the whole game including a track editor. I'm most proud, however, that we were the first rally game to have the reflections of the sky on the windows!

Unfortunately due to circumstances we won't go into, Strange Productions didn't last very long and you were soon on the move again?

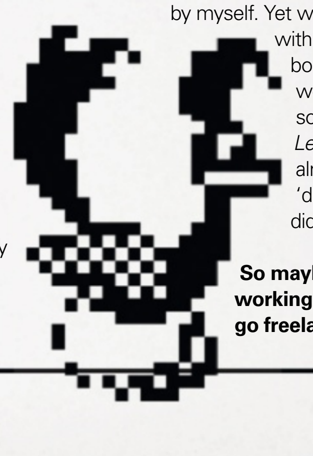
That's right, in 1999 I joined Software Creations in Manchester and was working on *Premier League Stars* on the PlayStation and *Supreme Snowboarding* on the Game Boy Color.

So another football game…

[Laughs] It wasn't so bad. My entire job for *Premier League Stars* was doing the render engine for the menu system! But the odd thing was I got paid a bigger bonus for doing that when I was part of a huge team than I did for coding the whole of *Supreme Snowboarding*.

For this game you eschewed the 2D template for Game Boy games?

They said I could try and do it in 3D and I had to come up with a plan of how it was going to work, get it done and then put a game around it. It was a tough game to code; there was someone else helping me with the menus, but otherwise I was doing it by myself. Yet we managed to get the game done within the deadline and I got a smaller bonus! So I asked them what they were trying to promote; I did practically sod-all in comparison on *Premier League Stars* and got a bigger bonus. It almost seemed like they were saying, 'do less work and get paid more'. I didn't like this ethic so I quit.



So maybe a little disillusioned by working for developers, you decided to go freelance in 2000?

NUMBER CRUNCHING

129 The number of rooms in Throne Of Fire, one more than 128

19 The number of programming languages in Jim's repetoire

49 published games, of which 11 were published by Ocean Software

27 years in the industry

7 The number of football games Jim has worked on, despite not liking the sport!

1137 The CC of the Honda Blackbird motorbike Jim used to have, and wants again, soon!

18 years from original design to the release of Apple Bob on iOS

32 levels in Jim's favourite VIC-20 game, The Perils Of Willy, despite the box boasting 33

2002 A busy year for Jim: one wedding, one mortgage, one new baby and four Game Boy Advance games!

That's right, and I continued working on Game Boy Color games such as *Tech Deck Skateboarding* and *TJ Levin's Ultimate BMX* for a company in America, as well as my first Game Boy Advance game. I also wanted to get away from the UK, so had moved to Canada and spent time between there and home.

After developing for the PlayStation and Saturn, why were you now focussing on the Game Boy?
As I was freelance and working from home, it was easier to do a game on the Game Boy than a big console game. I didn't want to work in a big team and I could do these games on my own.

You continued doing GB games with a couple of conversions of old Archer MacLean titles. How did this work?
Archer wanted the games *Super Dropzone* and *International Karate+* spot-on similar. I looked at the code, tens of thousands of lines including all the data, and thought 'I don't wanna be shifting through that'. I knew I could do a visual port faster, which was how I'd done some of my earlier arcade conversions. I'd play the game, watch how the baddies interact with me and how the game flows. Then I'd simply try and repeat that in code. Having practiced this technique, I knew I could do it quicker than having to convert all this code.

> "Working with Joffa Smith was amazing"

What did Archer think of this?
I don't think he wasn't overly pleased that I'd done it that way but thought I'd done a good conversion.

And all of these games were developed for Ignition Entertainment?
Yep, I'd been contracted to deliver nine games between 2002 and 2003. It was a busy time: I got married, bought a house with Su and our first daughter was born at the end of the year. Fortunately I already knew I would be doing the PlayStation versions of these GBA games, so I wrote them with that in mind.

After this period you remained at Ignition?
We were working on a game called *WarDevil* for the GameCube and Xbox. It was supposed to be a big interactive movie-type game and there was loads of coverage for it. We had a demo for the PS3 at E3 in 2005, but it was never a playable game and finally got canned a few years ago. After that they asked me to do an Xbox conversion of the PlayStation 2 game *King Of Fighters*, but there was a bug in the PS2 version which I couldn't find; it was writing into random bits of memory, which was fine in the original but it caused the Xbox to crash, so that never got released either.

Now you've turned to mobile development?
In 2010, for my birthday, Su bought me a Mac Mini and an iPod touch. She thought I needed to keep up with the times [laughs] and it was good timing, as I was soon made redundant from Ignition. So, myself and Paul Vera-Broadbent [with whom Jim had worked with previously at Rage] teamed up again and did a puzzle game called *i3*. Then we had the idea of updating an old Mega Drive game I worked on back in the Nineties, and this eventually morphed into *Apple Bob*.

And of course, in between all this, you've become renowned over the years for your own homebrew efforts. Which of these are you most proud of?
I always loved arcade games and wanted to write one. Back in the day of course this was difficult, but recently I had the idea that I used to convert arcade games to the Spectrum – so why not the other way round? – and did an arcade game called *PacManicMinerman*. I obviously couldn't release it commercially, but I did a board and it was put into a cab for a retro show a few years back. I was quite pleased with that as people loved it.

Which published games are you most proud of?
Cabal, *Midnight Resistance* and *Apple Bob*. The first two just because of the sheer feat of getting those complex arcade games as close-as-dammit onto the Speccy. And *Apple Bob* as it's my IP from 1995 and because of the care and attention to detail that we've put into it, with so many nods to classic games. We wanted it to have the feel of those classics, the games we played as kids, and I think we did a pretty good job.

Who do you admire that you've worked with?
Paul Vera-Broadbent was, and is, a totally awesome artist. But working with Joffa Smith was amazing. He was a brilliant artist *and* programmer which is a rare combination. That era is probably the one I look back on most fondly as well.

You're obviously a fan of retro games in general – what do you think makes them so appealing?
It's the memories that are attached to the games. With modern games you have no memories, unless it's a previous version. But with retro games it's our childhood memories as well, and it often all comes back from just the name of the game. It's not just the game, it's the whole experience. It's part of your life.

With a very small tear in its eye, Retro Gamer thanks Jim for his time and says goodbye. We never quite managed that game of pool but two-and-a-half hours of chatting retro games was a more than adequate replacement.



[Spectrum] *Road Runner* was Jim's first arcade conversion.



[Spectrum] Arnie – minus legs – in *Red Heat*.



[Mega Drive] *Striker* was a graphically impressive and playable arcade footie game.

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RETRORATED



>> New machines mean returns to classic franchises. This month we check out Killer Instinct, put the high-definition Defender clone Resogun through its paces and find out if Sega's 3D interpretations of its classic arcade games have been worth the wait

PICKS OF THE MONTH



DARRAN
Resogun
The gameplay of *Defender* and *Dropzone* combine with the modern razzmatazz of next-gen. Lovely.



NICK
Killer Instinct
Back and forth fighting makes *Killer Instinct* great with friends, despite the lack of content currently available.



» [Xbox One] We really like the melting effect on Shadow Moves, which create warping after-images of your fighter.

Killer Instinct

A QUICK WAY TO KILL SOME TIME

INFORMATION

- » **FEATURED SYSTEM:** XBOX ONE
- » **ALSO AVAILABLE ON:** N/A
- » **RELEASED:** OUT NOW
- » **PRICE:** £34.99 (ULTRA EDITION)
- » **PUBLISHER:** MICROSOFT STUDIOS
- » **DEVELOPER:** DOUBLE HELIX GAMES
- » **PLAYERS:** 1-2

BRIEF HISTORY

» Boasting impressive CGI sprites and crazy double-digit combo attacks, *Killer Instinct* was a huge hit for Rare in 1994, but the series suddenly vanished after a single sequel. Microsoft has revived the series for the Xbox One launch.

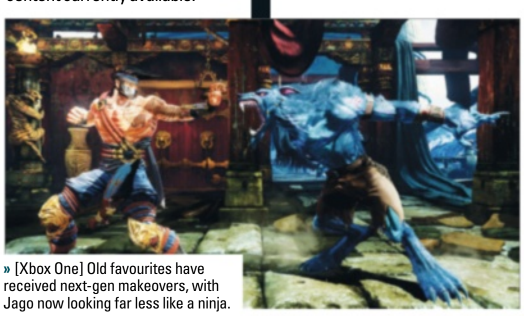
When Microsoft purchased Rare back in 2002, we imagine that *Killer Instinct* was not one of the top reasons for the acquisition. The series had been put out to pasture following *Killer Instinct Gold* and fighting games were somewhat out of fashion, with even Capcom's venerable *Street Fighter* series beginning a lengthy hiatus. Beyond that, the original *Killer Instinct* is very much a product of its time – buckets of blood and elaborate finishing animations a hallmark of the early Nineties period that gave us *Mortal Kombat, Primal Rage* and *BloodStorm*. To say we were surprised that Microsoft decided to revive the series for the Xbox One would certainly be an understatement.

Thankfully, it's evident that Double Helix Games has treated the series with care and respect. *Killer Instinct* includes all of the gameplay mechanics that we've come to associate with the series – Ultra Combos, Shadow Moves and the Combo Breaker (accompanied as ever by a shout from the excited announcer). Better yet, the developer has obviously been paying attention to its competition and has thoroughly modernised the fighting mechanics. The game is designed for competitive players to enjoy, as expected from the game's showing at Evolution 2013 fighting game championships. Command lists not only list the inputs required for special moves, but properties for fighting game fanatics such as frame counts and advantage on blocking. So as not to overwhelm newer players, a comprehensive training mode has been included, which helps to teach everything from fighting game basics to *Killer Instinct*'s deeper systems.

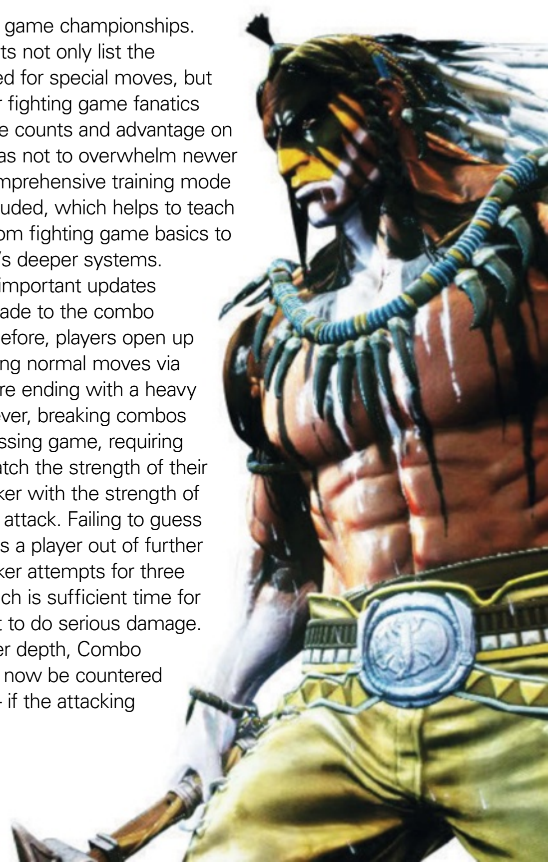
The most important updates have been made to the combo system. As before, players open up combos, linking normal moves via specials before ending with a heavy attack. However, breaking combos is now a guessing game, requiring players to match the strength of their Combo Breaker with the strength of the incoming attack. Failing to guess correctly locks a player out of further Combo Breaker attempts for three seconds, which is sufficient time for the opponent to do serious damage. Adding further depth, Combo Breakers can now be countered themselves – if the attacking



» [Xbox One] Instinct Mode gives characters a healthy glow, as well as improved fighting abilities.



» [Xbox One] Old favourites have received next-gen makeovers, with Jago now looking far less like a ninja.




» [Xbox One] Sabrewulf's feral nature has been impressively captured by the design team.

✱WHY NOT TRY

▼ SOMETHING OLD
KILLER INSTINCT (ARCADE)



▼ SOMETHING NEW
MORTAL KOMBAT (XBOX 360)



Killer influences

Mortal Kombat (Arcade)



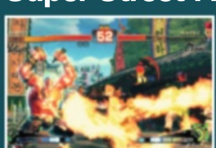
While *Killer Instinct* has always featured blood-soaked fights and spectacular finishing attacks, it was Midway's controversial game that brought this aesthetic into vogue during the Nineties' fighting boom. The influence is still evident.

Dead Or Alive 2 (Dreamcast)



Dead Or Alive 2 introduced an easy counter system to its series, allowing players to unexpectedly turn the tide during fast-paced battles. Fights in *Killer Instinct* have a similar flow, as the overhauled Combo Breaker system now allows for Counter Breakers.

Super Street Fighter IV (Xbox 360)



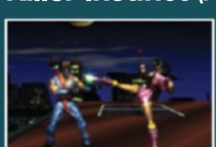
The training mode in *KI* is careful to teach players the fundamentals of fighting games as well as mechanics specific to the game. This is reminiscent of the training mode in *Super Street Fighter IV*, which sought to teach you more than just the special moves.

Ultimate Marvel Vs Capcom 3 (PlayStation 3)



Capcom's crossover fighters boast ridiculous combos and a bizarre range of characters, but it's the addition of Instinct Mode which reminds us of the X-Factor mechanic from that game. *Killer Instinct* develops this by personalising each character's bonuses.

Killer Instinct (Arcade)



It seems almost silly to point out the influence of the original, but this could easily have been a 'name only' update of *Killer Instinct*. By paying attention to what distinguished the original, Double Helix should please fans and newcomers alike.

player anticipates a Combo Breaker, they can perform a Counter Breaker which not only continues the combo, but locks the opponent out. Instinct Mode is a new feature, which grants special properties on activation which are unique to the character – Jago gains health regeneration, while Thunder's dashes become invincible and cover more ground. Instinct Mode can also extend combos by cancelling the previous animation, allowing for even Ultra Combos to be chained.

The result of all of these changes is that *Killer Instinct* is an exciting multiplayer game, which is hard to fault. Incredibly close back-and-forth matches are the order of the day when two players at a similar skill level face off, while the game allows players to dominate if they can demonstrate skill and experience. Online multiplayer is available, but we were unable to test this at the time of review.

As well as playing like *Killer Instinct* should, the game looks and sounds the part. The majority of the game's cast is comprised of classic characters, with fan favourites Jago, Orchid, Thunder, Sabrewulf and Glacius returning complete with their classic fighting techniques. The only new addition to the cast, the spider-themed assassin Sadira, fits into the roster well. Blood covers the ground as fighters receive damage, while particle explosions from projectiles return and look particularly spectacular. Ultra Combos are punctuated by background animations and musical flourishes, which always add a nice punch to your victory.

The game comes as a free demo featuring one character, with additional characters available for £3.99 each, or the *Combo Breaker* package which contains them all for £16.99. However, the £34.99 *Ultra Edition* package includes all the characters, customisation options and a rather tantalising extra in the form of *Killer Instinct Classic*. This is a very good conversion of the 1994 arcade original, featuring both the 1.4 and 1.5D revisions of the game, a variety of screen modes

» [Xbox One] Thunder lives up to his name, demolishing opponents with devastating lighting attacks.



including raster and CRT filters and a variety of extras, including animation galleries and CGI movies. If you're a long-term fan of the series, this is a great addition which serves to highlight just how close the new game is to the source material.

However, the main problem we have with *Killer Instinct* is that there just isn't enough of it. There's nothing wrong with what it does, but there is an awful lot that it doesn't do. Right now, very few game modes are available – single-player is restricted to versus fights or a survival mode, which means that the game is heavily reliant on multiplayer for long-term appeal. The characters are diverse but, with only six available, you're likely to have experienced everything the game has to offer before long.

Killer Instinct may be one to watch over the coming months. Fulgore and Spinal from the original cast have been promised, as well as a story mode, and Microsoft has hinted that the game may well develop further in the future. Unfortunately, the sheer lack of content makes it hard for us to recommend that you splash out the full £34.99 right now.

NIck Thorpe

In a nutshell

Double Helix has managed to create a game that captures the distinctive *Killer Instinct* feel while updating the fighting mechanics for the 21st Century. It's just a shame that the content is so sparse.

>> Score **72%**


» [Xbox One] Spider-themed assassin Sadira fits the cast perfectly, her offbeat design blending in well.

RETROROUND-UP

>> Every month we look at all the classics and latest releases that are available to buy or download



DOWNLOAD OF THE MONTH



INFORMATION
» **System:** PS4
» **Buy it for:** £10.99
» **Buy it from:** PSN

Resogun

Voxels, they're the new pixels apparently… You'll see a lot of voxels in HouseMarque's new game, as the screen explodes with them whenever you shoot down enemies or take out *Resogun*'s immense bosses. Of course the most delicious irony of *Resogun* is that the PlayStation 4's must-have exclusive is one that's based on 33-year old game design. Still if you're going to borrow from another game, then *Defender* is the perfect place to start.

But it would be churlish to accuse *Resogun* of simply taking ideas from Eugene Jarvis's classic blaster, as it adds plenty of its own neat touches, mainly revolving around *Resogun*'s neat scoring mechanic. Shoot an enemy, and as well as exploding into lots of voxels, it will start a score multiplier that will slowly build to 20 and reset if too much time passes. Needless to say you'll need to learn enemy waves to ensure you can maintain the highest scores.

Multipliers can be extended through careful boosting (which is in itself a neat risk versus reward system) while a screen-clearing smart bomb also helps you hold onto that precious multiplier. You can also unleash a devastating Overdrive attack for several seconds that can potentially send your score into the stratosphere. Eventually you'll lose your multiplier, however, and how quickly you regain it does seem to depend on where you are in the game (one of *Resogun*'s few weaknesses).

Another neat feature is the pilots that are released if you shoot down a wave of green enemies. Leave them too long and they'll be taken, further diminishing your points at the end of each wave. Luckily you can pick pilots up and take them to drop-off points to boost your score, or simply fling them at said drop-off points for an even higher bonus.

Resogun certainly isn't perfect, but it's a highly rewarding score chaser that's filled with plenty of neat little touches and some epic boss battles. The fact PS Plus members got this solid game for free during the launch period is amazing.

84%

>> OTHER HIGHLIGHTS



Need For Speed Rivals

» **System:** PC (tested), PS4, Xbox One, Xbox 360, PS3
» **Buy it for:** £54.99
» **Buy it from:** Online, retail
» While this racer looks glorious on next-gen consoles, it remains old-school at heart. Sure it has online integration that allows you to set up cops and robbers-based scenarios, but underneath the gloss is the DNA of classics like *Chase HQ*. The difficulty feels off at times and the 30fps lock is disappointing to see, but it remains great fun racer all the same that delivers plenty of spills and thrills.

78%



3D Space Harrier

» **System:** Arcade
» **Buy it for:** £4.99
» **Buy it from:** DSiWare
» Don't worry, this isn't a conversion of the acerage Master System game, but a brand new port from M2 that adds plenty of cool new options, leaving Sega's blaster feeling as fresh as a daisy. The option to start play from any completed stage will please newbies, but it's the sheer strength of the actual emulation that impresses here, with lots of options. Best of all the 3D itself works brilliantly, adding an exciting new perspective to Sega's classic blaster.

88%



Speedball 2 HD

» **System:** PC
» **Buy it for:** £5.99
» **Buy it from:** Virtual Console (3DS)
» The good news is that *Speedball 2* is still fun to play. Unfortunately, we're not big fans of the new visuals and you can't switch to the original style, which feels like a missed opportunity. Far worse is the fact that there's no online multiplayer, which is inexcusable in this day and age. We could live with this if *Speedball 2* offered a challenge, but it's fairly easy, meaning you'll have to look for a mate to get the most out of it. At least there are some new arenas…

70%



3D Super Hang-On

» **System:** Arcade
» **Buy it for:** £4.99
» **Buy it from:** Virtual Console (3DS)
» After seeing M2's superb PSN port, it's great to have a mobile version of Sega's hit racer in the palm of your hand. Sadly, while *Super Hang-On* is still great fun, it doesn't feel as polished as the excellent *Space Harrier* port. The 3D is also less affecting, and even a little disorientating at times due to the sheer speed the game plays at. It remains a great game, but it's clear that M2's attention was focussed on *3D Space Harrier*.

72%

Bravely Default

» **System:** 3DS » **Buy it for:** £34.99 » **Buy it from:** Online/Retail

A cursory glance of *Bravely Default* suggests it's just another clichéd Japanese RPG. Those first impressions are wrong however and you soon realise just how different this collaboration between Silicon Studios and Square Enix actually is. Yes it's built on typical conventions we've seen many times before, but an interesting twist is never too far away. Combat is excellent, revolving around 'Default' and 'Brave' mechanics that let you store battle points and eventually unleash them for additional and devastating attacks. Then there's the way you can use summon friends into games to deliver attacks, or build up your jobs, which makes this feel like a forgotten sequel to *Final Fantasy IV*. Street Pass is also used to rebuild the village that is decimated at the game's beginning, while a useful tome contains plenty of helpful hints and clever foreshadowing. It's all finished off with a surprisingly solid script that is extremely humourous and even a little bawdy at times. There's a little too much reliance on random battles, but this is otherwise top stuff and a perfect love letter to the 16-bit RPGs of old.

87%



HOMEBREW

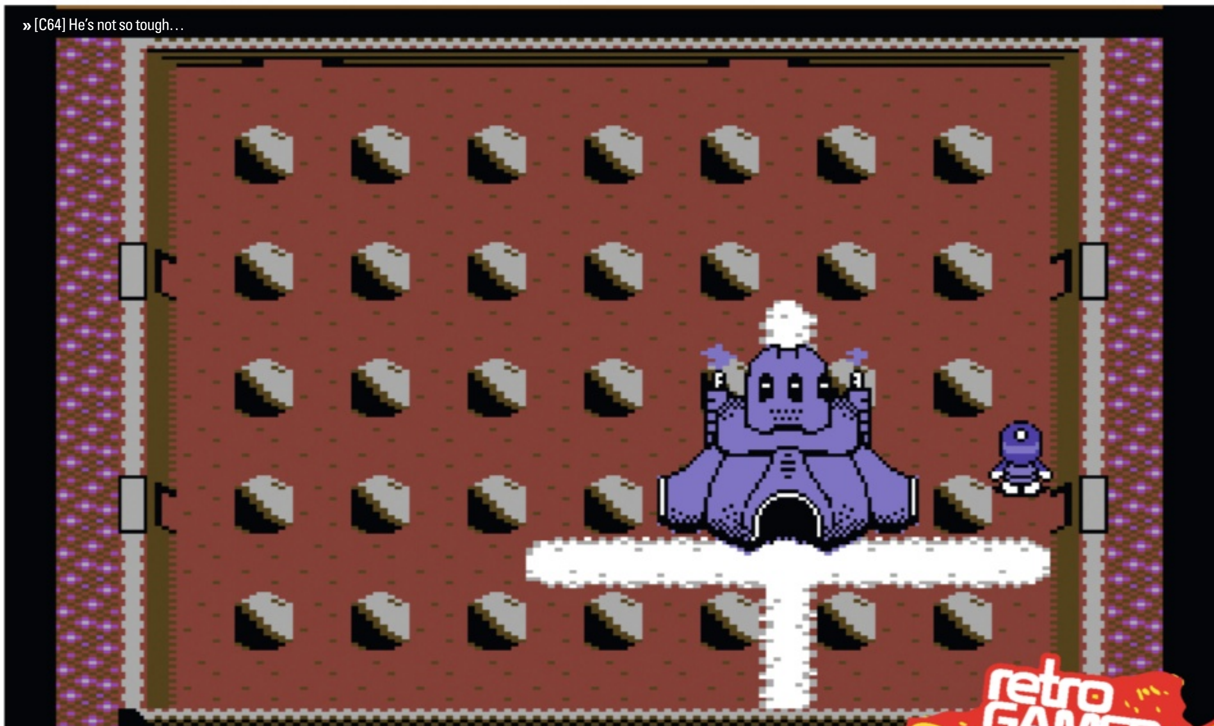
>> The scene's latest news and reviews



2013 was a pretty good year for homebrew. The various annual competitions gave us new games like Amstrad CPC blaster Relentless and Assembloids XE for the Atari 8-bit, some new publishers popped up and many of the retro and indie gaming events around the world have been covering homebrew for classic platforms. Hopefully we'll be seeing this trend continue and 2014 could be even bigger and better



FORMAT: C64
DEVELOPER: RGCD
LINK: KIKSTART.EU/BOMBERLAND-C64
RELEASE: 2013
PRICE: £1.99 (DOWNLOAD) OR £25.00 (CARTRIDGE)



» [C64] He's not so tough…

BOMBERLAND

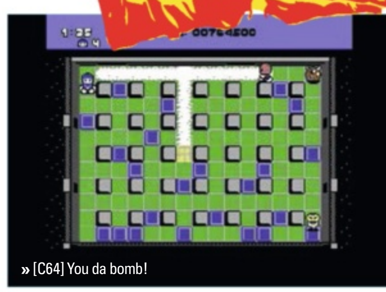
IS IT POSSIBLE TO HAVE FUN WITH HIGH EXPLOSIVES?

Bomberland was once a peaceful place, or at least as peaceful as any land can be when the locals – a race of creatures who look remarkably like disgruntled Lego spacemen – love nothing more than watching massive explosions going off.

But this idyllic and somewhat noisy existence has come under threat from the tyrannical Lord Bomber, the head of an extreme national party, winner of the last democratic election and well into negotiations to sell the services of the Bomberpeople as slave labour to anybody willing to pay. After their election defeat, the opposition have all been imprisoned and Lord Bomber's former political rival has now been declared enemy of the state number one but, rather than running for the hills, he's going to take on the dictatorship by doing what the people of Bomberland do best – making things go boom.

The rebellious former politician's quest to free his fellow citizens takes place in a series of arenas and his simple sounding mission is to strategically drop time bombs to blow Lord Bomber's minions up, avoid being caught by minions or his own explosions and escape the stage within the time limit. Scattered around the play area are brick walls which can be destroyed by leaving a bomb nearby; the stage exit is concealed behind one of these along with power-ups that increase the number of bombs which can be simultaneously deployed, as well as their explosive power.

Detonating a device by the exit or some of the power-up icons will release a cluster of enemies into the arena which must also be dealt with before leaving. There are also concealed skull-shaped random items which do things like change the player's speed, alter the blast radius and fuse length of the bombs or even disable the fire button entirely; the effects are only temporary, but these pick-ups need to be used with care since they'll significantly increase the odds of the player having something go 'boom' in their face or not being able to properly defend themselves.



» [C64] You da bomb!

A degree of caution is always needed when dealing with explosives generally, and our hero can become trapped in a cul-de-sac behind his own bomb.

Bomberland has taken developers Michal Okowicki and Owen Crowley around six years to complete after releasing an earlier version as *Bomberman 64* during the Game Over(view) Freestyle Jam in 2007 and, although that previous incarnation was good, this is pushing the envelope of what the C64 can do even further. Everything is colourful and smooth even when the play area is reduced to explosive carnage and the controls are responsive. It boasts an enjoyable single-player campaign and support for up to five human players during a deathmatch through a combination of a four-player adapter and keyboard control. This is a beautifully presented and very entertaining game which should keep people engaged for a long time.

90%



» [C64] Worst place to stand. Ever.

NEW GAMES NEEDED

If you have a homebrew project you would like to see featured then please contact us at:
retrogamer@imagine-publishing.co.uk

SACRED LINE: GENESIS

» **FORMAT:** SASHA DARKO » **DEVELOPER:** SASHA DARKO » **DOWNLOAD:** SASHADARKO.COM/GENESIS.HTML
» **PRICE:** $5.99 (STANDARD) OR $9.99 (UNIQUE PACK)

Private investigator Ellen has stumbled across the physical remains of a dangerous and sadistic cult called Holy Intentions and into the mess of dark powers they've unleashed through rituals and human sacrifice.

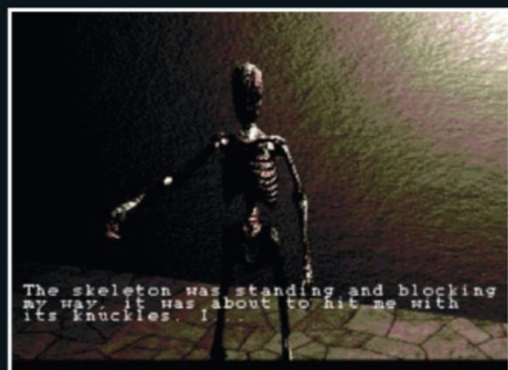
Sacred Line: Genesis is a Choose Your Own Adventure style game where the narrative is presented as a series of still pictures with text. Navigation is either a matter of pressing a button to move things along or through multiple choice questions, and the fight scenes rely on the player to roll a physical die.

This kind of game is all about telling the story. There aren't many choices to be made and a checkpoint system means that dying doesn't wipe out all of the current progress, so it shouldn't take long to play through and this limits its longevity. And, as noted on the website, *Sacred Line: Genesis* uses strong language and contains violent and disturbing scenes, so more sensitive players will probably want to give it a miss.

65%



» [Mega Drive] Now wash your hands.



» [Mega Drive] Nothing but skin and bone.



» [Apple II] Yes, very observant.

COCONUT CAKE CAPER

» **FORMAT:** SEGA MASTER SYSTEM » **DEVELOPER:** V CRISAFULLI
» **DOWNLOAD:** KIKSTART.EU/COCONUT-CAKE-SMS » **PRICE:** FREE

Expert bakers Bread and Butter have just added the finishing touches to their latest commission, a lavish coconut-flavoured wedding cake over 20 stories tall! Just as the payment for this ridiculous project is about to be handed over, it gets nabbed by a thief, who then legs it up onto the cake itself but drops the loot in his haste. So now Bread – assisted by Butter if there's a second player around – must make their creation inedible by traipsing around on it to collect dropped coins and bags of money while avoiding the crooks and other hazards.

Coconut Cake Caper is very jolly looking, but there are issues with the gameplay and in particular the ladders that connect the tiers of the cake, which can be difficult to use due to some picky collision detection. This isn't a bad game, but it'll prove frustrating for most players and could have been much more playable with a bit more work.

61%

BATTLE OF HOTH

» **FORMAT:** COLECOVISION » **DEVELOPER:** TEAM PIXELBOY
» **DOWNLOAD:** KIKSTART.EU/HOTH-CV » **PRICE:** £TBA

The Empire has sent an assault force to destroy the rebels' Echo Base on the planet Hoth and just one pilot is there to keep the All-Terrain Armoured Transports at bay with a modified T-47. AT-ATs can be taken out by pummelling them with blaster fire until the shields fail but this takes over 40 shots; faster options rely on the pilot having expert timing to use one of a limited stock of grappling hooks to trip an AT-AT or hitting a weak point which is occasionally illuminated by the Force.

There are five difficulty levels with 'Yoda' being the hardest, although stopping all of the AT-ATs on each stage without being shot down is a pretty tall order even at the easiest 'Jedi Initiate' setting. The Snowspeeder's shields can be replenished back at base but that gives the approaching forces more time and the battle will be lost if just one enemy manages to break through.

85%



» [ColecoVision] Come on boy, walkies!



» [ColecoVision] Unfortunate blaster positioning.

WHAT'S BREWING?

All the latest news from the homebrew community



» [Amstrad CPC] The original *Cyber Huhn*.

» Engage ludicrous speed!

Programmer Marco 'TFM' Sowa was the developer of Amstrad CPC 16K competition entry *Cyber Huhn* which saw players taking control of a defence turret in order to blast mutant chickens. As was promised at the time, an upgraded version called *Cyber Chicken* is being made available and the official website is www.cc-cpc.de, but fans of the original need to act quickly since there'll only be a limited run produced!



» [CreatiVision] Smooth *Scramble* scrolling.

» Scramble, scramble!

At the moment it's just a tech demo, but hopefully the preview and videos of a *Scramble* conversion doing the rounds for the VTech CreatiVision will materialise at some point because what we've seen so far is impressive considering the hardware restrictions. kikstart.eu/scramble-vtech goes to the CreativEmu forum thread which has the ROM image and links to YouTube showing more mature versions of the code.



» [Mega Drive] Where are the shields?

» Have we met?

And while we're on the subject of new renditions of classic coin-ops, how about a Mega Drive implementation of *Space Invaders*? At the moment there is a playable version at kikstart.eu/first-invasion-md but the difficulty currently feels out of balance – the last invader is far too easy to blast – and there are issues with the player occasionally respawning below a bullet. Hopefully these problems will be addressed before the final release.

HOMEBREW

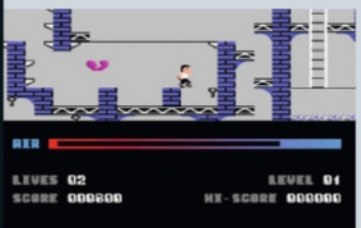
>> The scene's latest news and reviews

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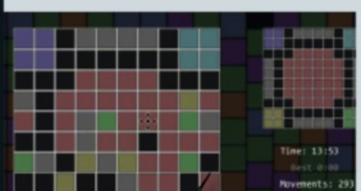
>> LIKE THIEVES IN THE NIGHT

The original *Son Of Blagger* was a scrolling platform game for the C64 released in 1984; the plot sees tea leaf Slippery Sid breaking into the National Security HQ and finding himself at the start of a journey through their weird defences to safety. This remake was brought to our attention by its developer on the **Retro Gamer** forum and, while it spruces up the graphics a little, the game itself is a reasonably faithful reproduction right down to the punishingly hard difficultly level! kikstart.eu/son-of-blagger-win heads over to the download.



>> THE NEW KID

The objective of *Block Shift* is to recreate increasingly complicated patterns of coloured blocks by shuffling rows and columns of the on-screen grid around with the controller. There are loads of puzzle games on the Xbox Live Indie service of course, but this one apparently dishes up over 80 challenges. Visit the XBLIG shop page at kikstart.eu/block-shift-xblig.





Want to know how to while away those boring office hours? Then don't miss out on **Retro Gamer**'s Flash game of the month. This month we take a look at **Alien Splatter.**

ALIENS HAVE INVADED EARTH AGAIN AND THIS TIME THE ONLY WAY TO DEFEAT THEM IS WITH SOME NO NONSENSE, NES-STYLED SCROLLING RUN-AND-GUN ACTION. ALIEN SPLATTER WARNS PLAYERS THAT IT IS 'NINTENDO HARD', WHICH MEANS FAST-MOVING NASTIES, SOME TRICKY JUMPS AND NOT MUCH TIME ON THE CLOCK. KIKSTART.EU/ALIEN-SPLATTER-FLASH.

MORE GAMES WE'VE BEEN PLAYING. . .

PATROL FALCON

» **DOWNLOAD:** WWW.KIKSTART.EU/PATROL-FALCON-WIN

A versatile VTOL fighter called the Falcon has been deployed in a desert area to defend it from insurgents by knocking their aircraft out of the sky before they have a chance to drop bombs on the factories, oil refineries and radar towers. Those structures aren't there just for decoration either; they provide fuel, parts and air-to-air missiles to the landing pads which will keep the Falcon flying as well as transmitting tactical information displayed in the cockpit as a *Defender*-style scanner which monitors activity in the surrounding area.

This is a remake of the C64 game *Falcon Patrol* from 1983 with a major cosmetic overhaul, but apart from a couple of tweaks the game itself remains faithfully simple. Engaging the enemy head-on won't work; instead a wave of jets must be found with the radar, allowed to pass without taking unfriendly fire or causing a mid-air collision and then caught up with to get a clear shot from behind with a missile. *Patrol Falcon* might not be complicated but it's still addictive to play and requires a degree of concentration since it's surprisingly easy to run out of missiles or even fuel in the middle of a dogfight.





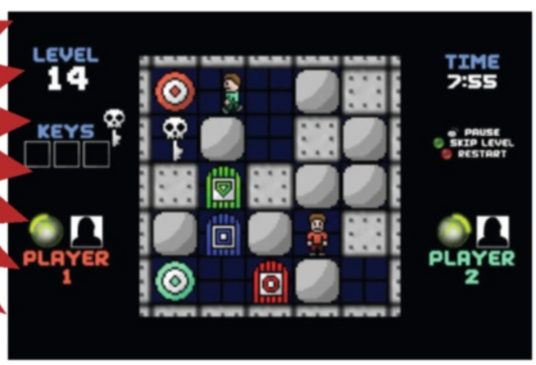


MICROMAZES

» **DOWNLOAD:** WWW.KIKSTART.EU/MICROMAZES-XBLIG

Micromazes are a series of small, retro-styled mazes each of which has an exit point that must be reached by the player to complete them. This objective wouldn't be particularly hard if it wasn't for the other items in every maze including blocks that need to be pushed, locked doors that require colour-coded keys and one-shot teleporters. Without forward planning it's very easy to become stuck, especially when there are secondary targets that need collecting along the way.

The game uses randomisation to keep the levels interesting and the challenge mode offers 50 screens for one or two people to work through; a second race mode is also available from the menu that allows up to four simultaneous players to compete against each other.





VACATION VEXATION

» **DOWNLOAD:** KIKSTART.EU/VACATION-VEX-XBLIG

There's nothing like a traditional family holiday by the seaside for a chance to relax, catch a little sun and get caught up on some reading. But for one member of the family there's all manner of annoyances to deal with and, before she can claim the perfect spot on the beach and settle down, there are a series of puzzles to solve.

Vacation Vexation is an arcade adventure quite similar in feel to the *Dizzy* series. The graphics are chunky but cute and the puzzles mostly revolve around examining everything and working out which items are required for each situation. There are also humorous touches throughout and, just like every good seafront, there's an amusement arcade with a couple of classic coin-ops and a crane machine to play on.

HOMEBREW HEROES



A COUPLE OF ISSUES AGO WE WENT EXPLORING THROUGH THE UNDERGROWTH OF PITFALL! FOR THE VIC-20 AND BUMPED INTO CREATOR GLEN RICHARDS WHO, DESPITE HOPPING OVER A ROW OF ALLIGATORS AT THE TIME, WAS WILLING TO TALK CYCLE COUNTING WITH US

Q&A

So the first question has to be how difficult was it to squeeze *Pitfall!* into the VIC-20?
It felt like I was working against the machine, but perhaps that was the fun of it. I wanted it to be visually as close to the Atari version as I could make it, and it took several aborted attempts before I came up with a central routine that approximated the Atari screen. Then there was the matter of cramming the game into the remaining machine cycles, which did come as a challenge.

And why *Pitfall!* specifically?
David Crane created a technically brilliant game that was fun to play and watch, and still is. As a kid, I was in awe of it – it was so colourful, so smooth. I always wanted a version for the VIC-20.

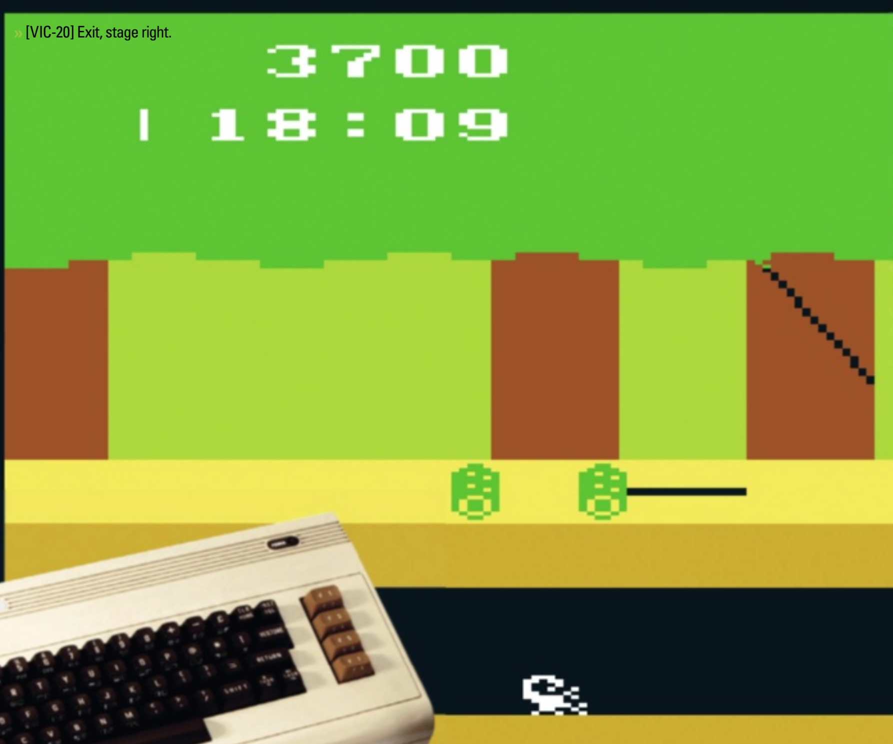
Do you find it easier to convert an existing game or start from scratch?
Nostalgia is the reason I am still programming for the VIC, so I prefer to convert an existing game where there's instant familiarity. There's often not a lot that can be directly converted from the original game other than maybe some graphic definitions or small bits of code crucial to the game, so it is easier for me to write my own code in a way I understand it rather than try to adapt existing code.

It takes more memory than the Atari 2600 ROM, why is that?
The Atari has a few hardware advantages over the VIC, like sprites that can be mirrored, playfield definition and complete line-by-line synchronisation. Sprites on the VIC need to be coded in software, and to help speed them along I've used pre-calculated lookup tables.

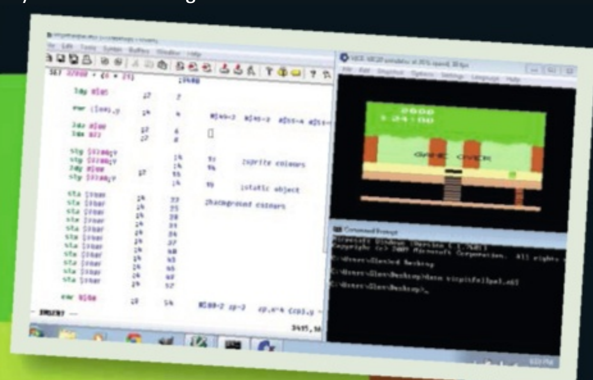
Then there's the raster effect – the holes, ladder, ground, green sky, pits and tree trunks are all the background colour, enabling the foreground graphics to move across them without colour-clash. The cobra, Harry and underground wall are multi-coloured by changing the colour value of the cells they occupy on each raster line. This coding comes at the cost of memory – 54 bytes per raster line – so to define the play area alone takes something like 6.5K of the memory.

Can you think of any moments that stand out during development, good or bad?
For a long time the game just took too much machine time to process, and I was left with a flickering visual mess. The day I finally got it to stabilise was a momentous occasion for me! Seeing the pits vanishing and expanding as they were meant to the first time was also a bit of a thrill.

Any chance of *Pitfall II* as an encore or do you have other plans?
No plans for *Pitfall II* at this stage, but I reckon I still have a few games to contribute for the VIC-20. There's a great community for the VIC to be found at Denial – sleepingelephant.com/denial – willing to help and share their knowledge, making projects like this rewarding and worthwhile.



[VIC-20] Exit, stage right.



[VIC-20] So that's how the background works!



MAILBAG

WIN!

This month's Star Letter prize is a cool Space Invaders Piggy Bank, courtesy of **www.funstock.co.uk**



HAVE YOUR SAY… SEND US A LETTER OR MAKE YOURSELF HEARD ON THE ONLINE FORUM – **WWW.RETROGAMER.NET**



» [C64] Strangely, while we were putting together the Mailbag we found a *10th Frame* tape in the office.

PIN PALS

Hello,

I have been a subscriber for almost five years and a regular purchaser since Issue 11. I've always enjoyed your magazine, especially the coin-op conversions. Being from the States I grew up on the C64 and Amiga so I really look forward seeing what machines were popular in Europe during that timeframe. This is my first letter and wanted to express my disappointment in your Access Software article in Issue 120.

I was very disappointed in the lack of coverage on their early title *10th Frame*. It was mentioned just in passing when referring to *Leaderboard*. I admit that it wasn't anywhere near as popular as the golf sim but it was the first bowling sim and deserved a little more recognition. The ball and pin physics are something that some publishers are still having trouble with, yet almost 30 years ago Bruce Carver had it pretty much down.

I'm an avid bowler and have played every bowling game to come out and *10th Frame* still holds up after 30 years. Better games have been released (*Ten Pin Alley* for PSone and *Wii Sports* Bowling) but it's still a good one if you fancy bowling. I'm not sure if bowling is still popular on your side of the ocean but it's America's number one recreational sport for families. Speaking of, I would love to see a bowling game article. Not sure if there is a demand for it so I'm just throwing it out there. Great magazine and keep up the good work.

Thanks,

Patrick Davis

PS – An article on the AKI wrestling games for the N64 (*WWF No Mercy*, etc) would be excellent as well.

We're sorry that *10th Frame* wasn't covered in the depth you'd hoped for, but as you point out it just wasn't as popular as *Leaderboard*. While we tend to get distracted by the arcade games on trips to the bowling alley, we can certainly appreciate a good bowling game – *League Bowling* on the Neo Geo is a favourite. We'll consider a bowling article for the future, but the audience may be a little too limited. As for wrestling, Nick is a fan and owns one of the bugged copies of *WWF No Mercy*, so it's certainly something we'll look at.

COMPILATION COMPLICATIONS

Dear **Retro Gamer,**

Thank you for the Compilation Kings feature in Issue 121 of **Retro Gamer** magazine! Having proudly owned most of the C64 compilations mentioned, plus the whole range of those listed under the Modern Hits category, there was certainly a tear in my eyes as I turned the pages.

This brings me to my second point. Playing original arcade games such as *Gauntlet II* and *Paperboy* merely makes me miss my trusty old PS2, despite being a PS3 devotee, and I would dearly love to see them made available for purchase on PSN. Yet although I know many games on the platform offer HD alternatives nowadays, would it be too much to ask to add a copy of the original, unaltered version on there as well?!

Stuart Hardy

Digital distribution sadly seems to have ended the era of the great retro compilation. The PS2 hosted great releases from *Intellivision Lives* to the *Taito Legends* series, which few modern packages live up to. We've noticed the trend towards HD remakes recently and while it's great to see publishers revisiting their classics in this way, we agree with you – we'd like the originals to at least be available alongside the enhanced versions, if not included as bonuses.

I LOVE THE NINETIES

Dear **RG**,

I am too young to have been around when the



» [Amiga CD32] Naming a *Doom* clone *Gloom* is pretty shameless, but it did well with Amiga owners.



» [Mega Drive] When playing *Bubsy*, just be thankful – you could be watching the unbearably dreadful cartoon pilot instead.

STAR LETTER

IT'S JUST NOT CRICKET

Dear **RG,**

With the Ashes coming up and us not having any equipment but wanting to play a bit of cricket, me and my mates improvised the other day, and it was a great day out for the families and kids.

We pooled our retro bits and pieces together, starting with beige breadboxes (C64 keyboards) for bats, simply sticky-taping Atari 2600 joysticks onto the sides to make handles. For helmets we used Virtual Boy headsets and I must say they looked rather nifty. Robby the Robot naturally stood in as umpire and did a terrific job, although none of us could really understand what he was saying or gesticulating about half the time. Two Spectrums were used as thigh pads as they were the perfect size (some of the fellas also used one as an effective chest guard). Two old Amiga flatbed scanners were used as pads because those damn things were almost unbreakable and fitted just perfectly.

We used real stumps because we didn't have enough of those cheap microphones from early 16-bit Creative SoundBlaster packages, we used a real ball, and for the Ashes, well, naturally we burnt to the ground a TRS-80 Model III and put it in an empty McDonalds Chocolate Sundae cup. That surely did the trick, with Dave taking care to write 'Ashes' on the outside should any of the kids accidentally gulp it down.

All in all it was a terrific day out and, due to the fact most of us were plastered and didn't remember the scores nor indeed who had won, we simply raised a toast in the end to the fact that another TRS-80 was destroyed and would never annoy humanity in any way, shape or form again.

Ashley Preston

While we're sure that many readers will be horrified at such a tale of hardware abuse, we must admit that this story gave us a good laugh. We can only imagine what horrors await your prize…

Don't forget to follow us online for all the latest retro updates

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THE ONES THAT GOT AWAY. . .

Darran discusses the covers that didn't quite make it





ACTIVISION

Activision celebrates its 35th anniversary later in the year, so we were keen on doing a cool cover to celebrate the momentous occassion. While we were really pleased with the overall structure of the cover, it felt a little too similar to our *Pitfall!* cover from Issue 25.

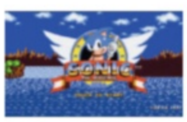
BOULDER DASH

Rockford is 30 years old, so it seemed like a good excuse to put him on the cover. We tried a few different options and fiddled around with this effort (a spoof of a promotional piece of art for *The Phantom Menace*). We couldn't get it to work though.

DISCUSSED THIS MONTH

Nick Thorpe

This month we've mostly been discussing our new staff writer. His name is Nick Thorpe and he's a huge fan of Sega, *Sonic* and arcade games. He's written for various websites in the past, but now he's fully dedicated to bringing you all the latest retro gaming content.

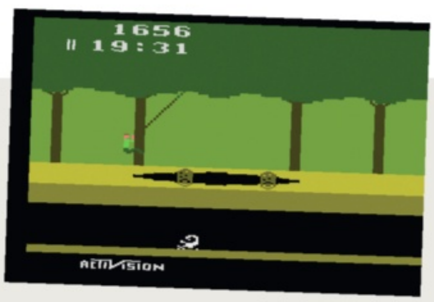


things you write about were popular. I do like modern games, but I will always believe that retro games are best. The Nineties was the golden era of gaming and I only know that because of your magazine, which made me love old games even though I had never played them. It's not that modern games are bad or too complex, they're just all the same. Every first-person shooter is basically the same as the last and the next, but back in the Nineties people were trying new things and weren't afraid to dip their feet in the cold water, even if there was a risk it might not work. Thanks for making the best magazine ever.

Sam Merrick

Thanks for the letter, Sam. It's true that publishers have become increasingly conservative in recent years, thanks to high development costs and worldwide financial trouble. However, it's worth noting that while the Nineties gave us a lot of innovative games, every era had its share of copycat releases. We remember when first-person shooters were routinely called "*Doom* clones" and shiver at the thought of the Nineties mascot platformer boom that gave us Bubsy the Bobcat.





From the forum

» www.retrogamer.net/forum

Every month, **Retro Gamer** asks a question on the forum and prints the best replies. This month we wanted to know…

Your favourite Activision game?

sirclive1
Ghostbusters – I don't know if everyone else feels this way but I love it, still played regularly after 29 years (and it was a Christmas present).

ncf1
Oh certainly *Boxing*. Although I still can't be sure if that protrusion is a nose or not, some decades on.

RuySan
Hunter. Awesome *GTA* clone before *GTA* even existed. Besides, did any of those games let you 'drive' a windsurf board? How that game could fit on one disk is a mystery.

Mire Mare
Right now it's a toss up between *Little Computer People* and *Hacker.* I had so much fun playing these innovative games! I'll go for *Hacker.* I return to that game more frequently because I've still never completed it! Is it even possible to complete it?

kiwimike
Man, they were the masters of the VCS! *River Raid* would have to be it for me personally, nods to so many honourable mentions, especially the often overlooked *Enduro* – not a bad game but forgotten because of the massive library of Activision brilliance.

ipmarks
Definitely *Pitfall!* Spent hours playing it… Oh wait I've never actually played *Pitfall!*, it was *Cuthbert in the Jungle* on the Dragon 32 at my friend's house. Complete rip off of *Pitfall!*, but played well.

paranoid marvin
So many great games. For the VCS, it's *Pressure Cooker* – great graphics, great sound and manic gameplay. On other formats *Rescue on Fractulus!* Few games make you want to **** yourselves; how many of us did that the first time we encountered a Jaggi trying to smash it's way into the cockpit?

antsbull
From classic Activision games, for me it was *The Tracer Sanction* on PC/C64. A graphic adventure set in outer space with a zany plot – it was brilliant fun. The PC version was thought to be lost for about ten years until Home of the Underdogs recovered it.

Eric
Keystone Kapers. That shopping trolley still haunts me today. The toy plane hitting your copper smack in the forehead is annoying too but also very funny.

flatapex
Tony Hawk's Pro Skater 4, genuinely loved that game.

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STRIDER

On the eve of Strider's return, we speak to Kouichi Yotsui, Capcom and Double Helix Games about the ninja's rich and colourful history

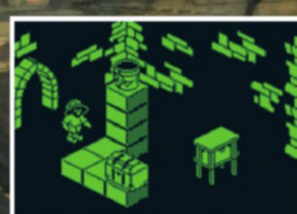


Retro Gamer At The Movies

■ With Oscar season just around the corner we've decided to give out our own nominations…

Knight Lore

■ Ultimate's game redefined the isometric adventure. We speak to the developers it influenced and explore its impact on the genre



Also featured:

• Acorn Archimedes • Advance Wars • Battletoads • Howell Ivy
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ENDGAME



STREETS OF RAGE 3

» Sega's third Streets Of Rage game upped the ante by delivering brand new playable characters in the form of Zan, an aged half-man, half-robot and Roo, a kangaroo, who looked the business with his natty boxing gloves but couldn't actually hold anything useful with them. There are several endings in Sega's brawler, but being the kings of gaming we are, we're naturally showing you the best one



01

» This is it. Your back's against the wall and you're in a desperate race against time as you attempt to beat down Robot Y before the three-minute timer runs out. It's a tough fight, even with two players, but eventually you deliver the killing blow.



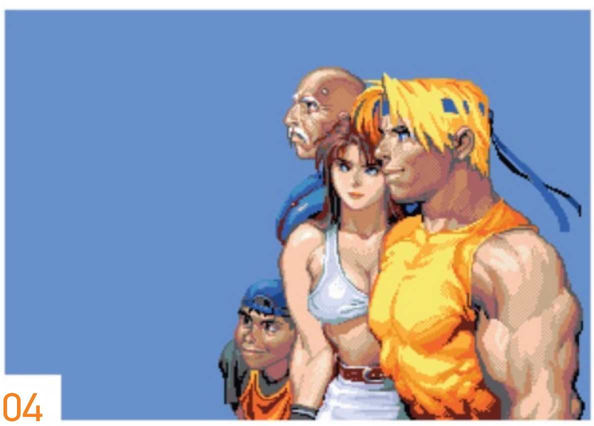
02

» Like any defeated foe, the injured sentinel brain asks for its life to be saved, to which the team rightly refuses. Like a petulant child who's been refused a chocolate bar, Brainy throws a hissy fit and threatens to destroy the base.



03

» Hooray! Adam turns up in the nick of time and rescues little brother Skate and the rest of the team, saving the day. What do you mean 'who's Adam?' He's the guy no one ever picked in the original *Streets Of Rage*.



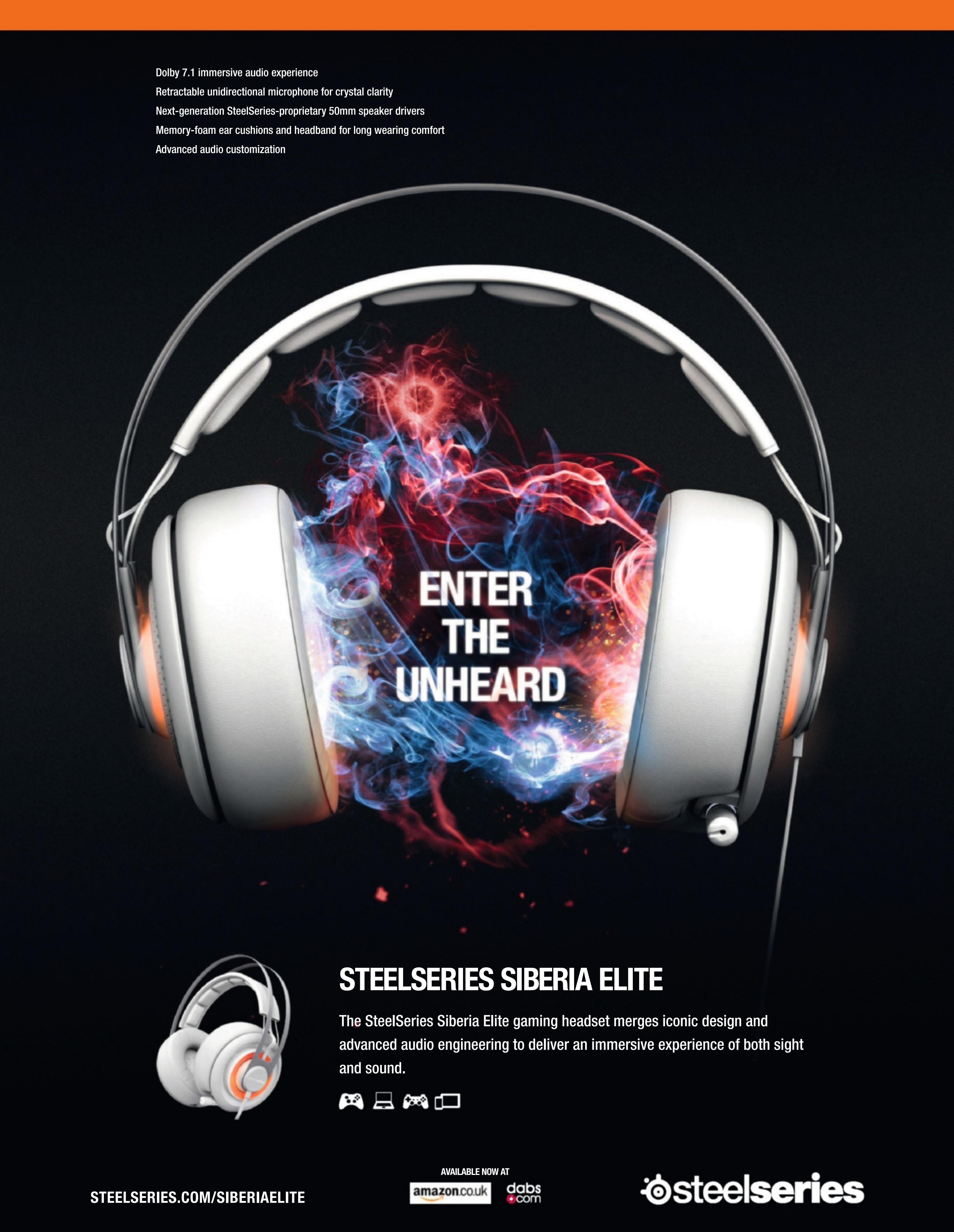
04

» After a dramatic team pose the companions go their separate ways. Blaze appears to revert to an outdated female stereotype for a spot of modelling, Axel kicks someone in the hand, Dr Zan heads off on holiday somewhere and Skate reunites with his brother. Awwwww.



05

» With the city now safe, Axel, Blaze, Skate, Adam and Max watch the sun rise over the city, content with a job well done. What do you mean 'who's Max?' He's the guy that no one picked in *Streets Of Rage 2*. Honestly, haven't you been following the trilogy at all?



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